

INDIANA

Native Plant and Wildflower Society

NEWS

Volume V Number 1

Spring 1998

Buckthorns in Indiana

the Good, the Bad, and the Ugly

by Kevin Tungesvick

The buckthorn family contains some of our finest native shrubs, as well as some of our worst invasive exotics. In Indiana, this family is represented by two genera, *Rhamnus* and *Ceanothus*. *Rhamnus* contains three species native to the state and two of our worst invasive shrubs. *Ceanothus* is represented by two native species, one of which is now extirpated in Indiana.

Unfortunately, the most common buckthorn species in the state are exotics. Glossy Buckthorn (*Rhamnus frangula*) is a horrible weed of fens, bogs and other wetlands. It is a thornless shrub with glossy elliptic leaves and gray-brown twigs with elongate lenticels. It can be distinguished from all other buckthorn species in Indiana by its entire, or untoothed leaf margins. The yellowish-green five-parted flowers develop into glossy black berries, which are consumed and disseminated by birds. This shrub may reach the size of a small tree, occasionally growing 20 feet high with up to a four-inch trunk diameter.



Glossy Buckthorn
(*Rhamnus frangula*)

At Springfield Fen in Laporte County, acres of wetlands have been usurped by this species. According to Tom Post, Regional Ecologist with the Division of Nature Preserves, approximately 35 to 40 percent of this preserve is infested

with Glossy Buckthorn, including nearly all of the available sedge meadow habitat. This condition remains in spite of the fact that thousands of volunteer hours have been spent removing buckthorn over the past 10 years.

Central Indiana wetlands are also prone to invasion by Glossy Buckthorn. I have witnessed specimens of this species over 15 feet in height with a three-inch trunk diameter in a degraded fen along White River east of

Anderson. Although this fen is currently choked with Buckthorn, Multiflora Rose, and native Ninebark (*Physocarpus opulifolius*), the presence of prairie species such as Big Bluestem, Indian Grass, and Dense Blazing Star along a roadside that cuts through it tes-

tify to its formerly open nature. A few weak specimens of the state-endangered Great St. John's-wort (*Hypericum pyramidatum*) also continue to survive in the ever increasing shade of several large buckthorns, once again demonstrating the deleterious effects of exotic species on native biodiversity.

In Marion County I have seen Glossy Buckthorn thriving in groundwater seeps along Fishback Creek northwest of Eagle Creek Reservoir. Unfortunately, Glossy Buckthorn remains widely available in the nursery trade. The upright variety *columnaris*


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and its named cultivar 'Tallhedge' are promoted by the industry as screening plants for their glossy dark green foliage and narrow upright habit. The dissimilar-appearing Cutleaf Buckthorn (*Rhamnus frangula* 'Asplenifolia') has almost linear foliage and abundant fruit. During the 1996 INPAWS Indiana Dunes trip, I pointed out a hedge of Glossy Buckthorn planted along the parking lot of a fast-food establishment. In the mulched bed surrounding the hedge, hundreds of seedlings testified to the fecundity of the species. I urge anyone who is concerned about the plight of our native flora to avoid purchasing this shrub and to educate others about its invasive nature.



 Common Buckthorn (*Rhamnus cathartica*)

Common Buckthorn (*Rhamnus cathartica*) is an equally invasive exotic shrub of woodland habitats. It differs from Glossy Buckthorn by having dull green leaves that are more ovate with fine teeth along the margins. Its gray-black branches may also contain small thorns. Unlike Glossy Buckthorn, it is dioecious, meaning the male and female flowers occur on separate plants. Like Multiflora Rose, Autumn Olive, and Amur Honeysuckle, Common Buckthorn was frequently planted to provide food and shelter for wildlife.

To truly realize the invasive nature of Common Buckthorn, one should travel to the Chicago Region. There, many of

the remnant woodlots and oak savannas have an understory composed entirely of large round specimens of this shrub. Like many exotics the leaves of Common Buckthorn remain green well after the native woody species are bare, making them particularly easy to identify in late fall. Many thousands of volunteer hours have been spent removing this species from the Forest Preserve Districts of the Chicago Region.

Unfortunately Common Buckthorn is likely to increase in Indiana in future decades. It has been seen in several areas of Eagle Creek Park, including young second-growth forest just south of the Nature Center. It is an abundant shrub at Christy Woods on the campus of Ball State University in Muncie. In the not too distant future, Common Buckthorn will likely battle Amur Honeysuckle for possession of the understory of our degraded urban woodlots.

Buckthorns . . . continued on page 4

Indiana Native Plant and Wildflower Society Newsletter

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The Mission of the Indiana Native Plant and Wildflower Society is to promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the values, beauty, diversity and environmental importance of indigenous vegetation.

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President's Message

by Ruth Ann Ingraham

Long before the term "native plants" became a part of my awareness I unwittingly learned about the essence of native plants.

In 1969 I purchased a new-model Toyota station wagon which, to my surprise, turned out to be lemon—not a car. In 1972 I sold that Toyota to a man who was convinced that anything made in Japan was great—in spite of my documentation to the contrary. Fortunately my mother was ready to retire her big old yellow Buick and she passed it to me for an extremely modest price. With the profit from those two transactions I chose to landscape the yard around my Broad Ripple home here in Indianapolis.

Happily, at the southeast corner of the house a small, sunny garden space was created where a concrete walk had been. Aging yews provided the traditional backdrop.

I decided to apply my latent creativity to the design of this mini-garden and

drew a plan. (That hand-drawn, multi-colored design is still tucked inside the front cover of the 1972 edition of Time-Life's *Perennials*.) I sent my plant order off to Wayside Gardens and while I waited for my order to arrive I envisioned the splendor that would soon appear outside my dining room window spring through fall.

The plants arrived and I lovingly put them into place.

Gradually, over the span of a few years, all of those plants died. But to my surprise and delight, something unplanned appeared. Black-eyed Susans. They self-sowed and spread, and summer after summer they formed a glowing mass of color through Indiana's torrid summer months with scant attention, one might say negligence, on my part. And in the winter the seed heads provided a natural food source for goldfinches.

Eight years ago Joe and I purchased a little cabin with some land in Brown

County. The land, which slopes from the gravel access road down to the cabin, had been mowed. We decided to see what would happen if we stopped mowing that area. Could we have something worthy of the name meadow, we wondered. That was a relatively novel concept to us then. An annual early-spring mowing was all that was required to reap unanticipated rewards. Now there is a warm-season panoply of native grasses and flowers, including Little Bluestem, Purple Top, Goldenrod, Asters, Rosepink, Yarrow, Butterflyweed and, last fall, the native orchid Ladies Tresses and an accompanying array of insects. In the winter, juncos, finches and sparrows feed on the seed heads.

Many of us in INPAWS are novices and stumble along until we accidentally find ourselves surrounded by nature's glorious floral gifts. It pays to welcome native plants that choose to grace our environments.

INPAWS Spring Native Plant Auction

will take place

Saturday, May 16

at the Community Center
on the campus of
Augusta Christian Church
3445 W 71st Street,
Indianapolis.

10 AM . . . donations will be received;

noon . . . the \$2, \$4 and \$6 sale tables will open;

1 PM . . . the auction will begin.

Light snacks and beverages will be available.

Message from Rolland Kontak, Auctioneer

It's not too early to start thinking about your auction donations.

In just a few years we have realized thousands of dollars from your donated native plants, garden hardware, books and art items, and other related material. (Bird houses, ornamental faucets, etc., etc.)

Here are a few hints to insure your donation brings the highest return it deserves:

On your plants, make sure they are well grown, potted early enough to acclimate and not wilt (at least two weeks before the sale).

Present them in an appealing container, clean and fresh, appropriately sized for the content. Label them accurately. Botanical names are desirable. Donor name is optional.

If you need containers I have many hundreds of flats and pots, from two-inch clay pots to three-foot tubs for trees. They are yours to pick up provided they return filled for the auction. Call me (317-356-0953).

Hardware, art objects, wearables and books should be desirable, not cast-offs.

Please deliver your donations AT LEAST one hour, preferably two, before sale time. You can only imagine the frenzy of that last hour before sale time when the pricers and sorters are making those last minute preparations.

All donations are tax deductible if you choose. We have a system to track your donations and furnish appropriate documents for tax purposes.

Join the fun. I'll see you on May 16.

For more information call Dianna Zamani (317) 233-8084.

Interestingly, Charles Deam, while noting several records for Common Buckthorn, excluded it from his *Flora of Indiana*. However, he remarked that when planted in his arboretum, hundreds of seedlings were produced, prompting him to destroy the seedlings and parent plants.

In *Plants of the Chicago Region*, Floyd Swink and Gerould Wilhelm report several other alien *Rhamnus* species that have escaped around the Morton Arboretum, including Dahurian Buckthorn (*Rhamnus davurica*), Japanese Buckthorn (*Rhamnus japonica*), and Chinese Buckthorn (*Rhamnus utilis*). Therefore, any non-native buckthorn should be considered potentially highly invasive. Fortunately these species are not currently widespread in the nursery industry.

In contrast to the alien species, native members of the *Rhamnus* genus are fine conservative species of our woodlands and wetlands. Lanceleaf Buckthorn (*Rhamnus lanceolata*) is an uncommon plant of fens and rocky slopes. In Indiana it occurs locally from the Wabash Valley in the north central portion of the state south to the Ohio River. I have found it as an occasional plant in an area of remnant fens in Henry County in the east central part of the state. There, it appears to prefer shrubby wetland borders. This species also occasionally occurs in old field habitats in southeastern Indiana. It is a rounded shrub with four-parted flowers and dark green lanceolate to elliptic foliage with fine teeth along the mar-

gins. Its attractive foliage and adaptability to upland sites might make it a useful ornamental shrub if it were available in the nursery trade.

Alder Buckthorn (*Rhamnus alnifolia*) is a low shrub, usually less than a meter tall, that occurs in bogs and fens. In Indiana, it is largely restricted to the northern two tiers of counties. It differs from Lanceleaf Buckthorn by having five-parted flowers.

At the other end of the state, Carolina Buckthorn (*Rhamnus caroliniana*) is restricted to a few counties bordering the Ohio River in south central Indiana, occurring on rocky wood-slopes. It is a common plant in dry oak woods surrounding limestone

glades in southern Harrison County. Like Alder Buckthorn, Carolina Buckthorn has five-parted flowers.

The other genus in the buckthorn family in Indiana, *Ceanothus*, contains one of our most attractive and interesting native shrubs. New Jersey Tea (*Ceanothus americanus*) often remains under two feet in height, producing attractive white flowers in July over dark green, ovate foliage. It occurs in prairies, savannas, and open oak woods.

The seeds of this species require a heat treatment before they will germinate,

making it one of the most fire-dependent members of our flora. The leaves have been used to make a tea substitute, hence the common name. New Jersey Tea is found throughout the state, but is most common in the prairies and savannas of northwestern Indiana.

According to Deam, Redroot or Inland New Jersey Tea (*Ceanothus herbaceus*) formerly occurred on low dunes in Lake County between Pine and Miller. It is believed to be extirpated, as much of its habitat has been destroyed by industrial development. It differed from New Jersey Tea by having narrower lanceolate leaves. Both *Ceanothus* species bloom on new wood, another adaptation to a fire-maintained habitat.

Since exotic buckthorn species will continue to increase in Indiana, concerned individuals should learn to identify the various members of this family, so that we may conserve the native species and remove the invasive ones. Effective removal can usually be accomplished by cutting the shrub as close to the ground as possible followed by the

application of a solution of 50% Glyphosate herbicide (Roundup) to the cut stump. Such actions will help ensure that future generations will not be deprived of the opportunity to enjoy our diverse botanical heritage.

Kevin Tunesvick is INPAWS Vice President, Program Chairman, and loves to clean seeds, which he does, among other things, at Spence Nursery in Muncie.



Lanceleaf Buckthorn
(*Rhamnus lanceolata*)



New Jersey Tea
(*Ceanothus americanus*)

Committee Reports

CONSERVATION COMMITTEE

INPAWS Joins the Native Plant Conservation Initiative

In November 1997, INPAWS became a cooperator with the Native Plant Conservation Initiative (NPCI). The NPCI is a consortium of ten federal agencies and one hundred state and local cooperators who are collectively engaged in solving the problems of native plant extinctions and native habitat restoration. Among the federal agencies are the National Park Service, Bureau of Land Management, U.S. Geological Survey, and the Fish and Wildlife Service. The list of cooperators reads like a Who's Who of groups that share INPAWS' interests, for example, Natural Areas Association, and Native Plant Societies from Maryland, Missouri and Montana.

The NPCI is involved in exchanging information, ideas and expertise. Each year it awards thousands of dollars for on-the-ground conservation and restoration projects. Since its inception in 1994, grants have been awarded for 71 projects, totalling \$1,500,000 in federal funds and matching non-federal contributions.

For more information, visit the NPCI's home page at

<http://www.aqd.nps.gov/npci/>

Ted Harris, Conservation Committee Chairman

A NEW INPAWS PERK!!!

INPAWS members now have an opportunity to visit native plant gardens of fellow members listed below. Please call to arrange a time for your visit, or, if a date is specified, please call your host or hostess to let him or her know you are coming.

Bartholomew, April 4, 2-7 PM
Art Hopkins • 812-372-2862

Brown
Colin Reeves • 812-988-9438

Hendricks
Colletta Kosiba • 317-852-5973

Marion
Carolyn Harstad • 317-257-9452
Virginia Finch • 317-291-0523

We would like to continue these open houses. Many INPAWS members have indicated an interest in touring prairies and meadows established by other members. We would like to see what you have growing and learn of the failures (if any) and successes you have had. I need you to volunteer your site, so we can offer the tours in the June newsletter. Please share your experiences. You may either choose a date for an "open house" or arrange visits on an individual basis. Please let me know if you are interested. Call or write. No location is too small.

Colletta Kosiba, Chairperson,
Speakers Bureau • 317-852-5973.

SPEAKERS BUREAU

The following INPAWS members will give programs on native plants at events open to the public. Come see their presentations!

Folklore of Native Plants
Sue Nord, Indianapolis Museum of Art, March 5, 7 PM

Return to Natives
Colletta Kosiba, Flower&Patio, March 17, 4 PM

Creating Backyard Wildlife Habitat
Greg Oskay, Danville Fairgrounds, March 27, 6 PM

Medicinal Herbs
Diane Stippler, same location, March 28, 1 PM

Wildflower Slide Show
Colletta Kosiba, Plainfield Library, March 19

Wildflowers and Edibles
Dan Anderson, Ft. Harrison Nature Center, April 15, 10 AM - 4 PM

Nature Books Review
by Tom Potter, photographer and INPAWS member,

Borders Bookstore at Keystone at the Crossing, Indianapolis, at 7 PM on Thursday, April 16

Wildflower Workshop
May 7 - see under "Coming Attractions"

Call Colletta • 317-852-5973 • for more information.

<http://www.inpaws.org>

Visit our website for news and information about INPAWS and native plant issues, as well as links to a wealth of like-minded organizations.

We would like to update our site with **your** news, information, comments, ideas, opinions, suggestions, in short, anything of interest to those concerned with preserving native plants and their habitats.

Please email Anne Wilson • wilson@hsonline.net.

M U L T I F L O R A E

PLANT COLLECTION IN NATIONAL FORESTS

The USDA issued a new policy regarding collection of plants in the Wayne and Hoosier National Forests in 1993, due to the over-harvesting of species such as Yellowroot and Ginseng. Since its issuance, it has become apparent that many people are not aware of the requirements, so we have been asked to publicize them.

- 1 • Plants on the threatened, endangered, sensitive, rare and unique list may not be collected.
- 2 • There are certain areas within each forest where collection is prohibited. These include various research and experimental areas.
- 3 • Plant collectors, whether commercial or individual, must buy a \$10 permit from each district in which they intend to collect. The permit application must state the species to be collected and the area in which the collector intends to operate. Maps of prohibited areas will be available at the district offices.

For more information, please contact Ellen Jacquart, Brownstown Ranger District, 608 W. Commerce St., Brownstown IN 47220 (812-358-2675) or Karen Hughes, Wayne National Forest, 219 Columbus Rd., Athens, OH 45701 (614-592-6644).

last chance for seed

May 1 is the last day to order locally grown native plant seeds at a bargain price! See insert in this newsletter for a catalogue of seeds collected and processed by INPAWS members. Send to Rolland Kontak, 2403 S. Emerson Ave, Indianapolis, IN 46203, or email wilson@hsonline.net. All proceeds will benefit INPAWS.

YOUR HELP NEEDED IN RESTORATION AND MAINTENANCE OF NATURAL AREAS...

Vital to Indiana are its volunteer land stewards who protect native plant communities in our prairies and savannas, wetlands and forests. Listed are some opportunities to get involved in protecting Indiana's natural heritage. If you are interested in helping, please call the numbers below for more detailed information and more dates and times for April, May and June.

Central Indiana Land Trust (CILTI)
765-362-1509

Henry County Cemeteries
March 15, 12:00 noon, Prairie habitats

Gene Glick NP
March 29, 1:00 PM, Woodland habitat, Indianapolis

Burnett Woods
April 5, 2:00 PM, Forest habitat, Near Avon

John Suman's Woods
April 11, 8:00 AM, carpool from Indianapolis

The Nature Conservancy (TNC)
317-923-7547, TNC & Indiana Div. Of Nature Preserve Properties

Gravel Hill Prairies
Tippecanoe Co., March 1, 12:00 noon

Conrad Station Savanna
Jasper Co., March 15, 12:00 noon

Gravel Hill Prairies
Tippecanoe Co., March 20, 12:00 noon

Lowe Prairie
White Co., March 28, 12:00 noon

Sycamore Land Trust (SLT)
812-336-5382

Bean Blossom Bottoms
March 28, 10:00 AM, Woodland habitat

Sierra Club, Heartlands Group
317-259-4417

Marott Park Nature Preserve,
Indianapolis, April 18, 9:00 AM

Indy Parks
317-327-7180

Holliday Park, Indianapolis
April 18, 9:00 AM

Don Miller • 317-927-3047

NATURE WALKS AT BUTLER UNIVERSITY

Dr. Rebecca Dolan, Director of the Friesner Herbarium at Butler University, will be leading tours on the Butler campus on the following Tuesdays at noon:

March 10
Early Spring Wildflowers

April 14
Spring Wildflowers

May 12
Late Spring Wildflowers

June 9
Wildflowers Along the Canal

Meet behind Gallahue Hall near the greenhouse. Tours will last about 40 minutes. There is no charge and all are welcome. Please come prepared for mud!

If you would like to receive a monthly reminder of the walk, or wish to be dropped from the reminder list, please call Dr. Dolan at 317-940-9413, or email rdolan@butler.edu.

Munchkin Nursery

operated by INPAWS member Gene Bush, is offering a wide selection of native plants in his 1998 catalog. If you would like one, send \$3 to:
323 Woodside Dr. NW
Depauw, IN 47115-9039

Outdoor Indiana

now features articles on native plants among its informative articles and excellent photography. Cost is \$10 yearly. Write:

Outdoor Indiana
402 W. Washington W160,
Indianapolis, IN 46204-2742.

1997/1998

Native Plant Seed Sale



HOW TO ORDER

- All seeds are \$1.00 per pack.
- Add only \$1.00 for shipping regardless of the size of the order.

• Circle the item number of the items you want.

- Choose at least three alternates (per order) and write their item numbers in the blank space provided.
- To order multiple packs of the same species indicate quantity in space below item number.

- Make all checks payable to "INPAWS."
- Address orders to:

Rolland Kontak
2403 S. Emerson Avenue
Indianapolis, IN 46203

TOTAL PACKS _____ @ \$1 = \$ _____
PLUS \$1.00 SHIPPING \$ _____
TOTAL ENCLOSED \$ _____

NAME _____

ADDRESS _____

CITY _____
STATE _____
ZIP _____

TELEPHONE _____
EMAIL _____

- No germination tests have been made.
- The quantity of seeds per pack has been determined by availability, seed size, or rarity/desirability of the species.
- Seed volume is adequate for home culture or experimentation. Quantities are not large enough for large restoration projects.
- Fluff and chaff are to be expected in some species.
- No shipments will be made outside the USA.
- Allow up to two weeks for receipt of order, although one week should be the norm.
- Your order form will be returned with your seeds.
- No cash refunds will be given. Alternates will be used for refund.
- Please report results, disappointments and satisfactions.

note: last day to order is May 1

PROPAGATION HINTS

In general, best results can be expected when seeds are sown as soon as received, and sub-

jected to outdoor natural influences. However we must guard against rodent intrusions, washouts, etc., etc., etc.

A reasonable regimen is to divide a seed supply into several parts and subject each part to a different influence. These can be varied potting soils, time of planting, moisture control, temperature variation, light or darkness exposure, covering or surface sowing, chemicals, presoaking, (especially legumes). Please report successful methods.



Much specific information is available from a host of authors. A short list:

Seed Germination Theory and Practice by Norman C. Deno, published privately by NCD.

Address inquiries to:
139 Lenor Drive, State College, PA 16801

Growing and Propagating Wild Flowers by Harry R. Phillips
ISBN 0-8078-4131-5 (pbk)
The University of North Carolina Press

The Wildflower Gardener's Guide by Henry W. Art
ISBN 0-88266-668-1 (pbk)
Garden Way Publishing Co.

Thanks to the following seed donors:
Don Bickel, Gene Bush (Munchkin Nursery), Becky Dolan, Ruth Ann Ingraham, Virgil R. Knapp, Rolland Kontak, Jean Roberts, Anne Wilson, Dianna Zamani, and anonymous.

001	<i>Actaea pachypoda</i> White Baneberry	025	<i>Cimicifuga racemosa</i> Black Cohosh	049	<i>Hypoxis hirsuta</i> Yellow Star Grass	073	<i>Rudbeckia subtomentosa</i> Sweet Black-Eyed Susan
002	<i>Andropogon gerardii</i> Big Blue Stem	026	<i>Cinna latifolia</i> Wood Reed Grass	050	<i>Hystrix patula</i> Bottlebrush Grass	074	<i>Sambucus canadensis</i> Elderberry
003	<i>Andropogon scoparius</i> Little Blue Stem	027	<i>Clematis viorna</i> Leather Flower	051	<i>Iliamna remota</i> Kankakee Mallow	075	<i>Scutellaria incana</i> Downy Skullcap
004	<i>Aquilegia canadensis</i> Wild Columbine	028	<i>Coreopsis tripteris</i> Tall coreopsis	052	<i>Lactuca biennis</i> Tall Blue Lettuce	076	<i>Scutellaria ovata</i> Heart-leaved Skullcap
005	<i>Arisaema dracontium</i> Green Dragon	029	<i>Cornus florida</i> Flowering Dogwood	053	<i>Lespedeza spp.</i> Bush Clover	077	<i>Silphium integrifolium</i> Rosin Weed
006	<i>Arisaema triphyllum</i> Jack-in-the-Pulpit	030	<i>Corydalis sempervirens</i> Pink Corydalis	054	<i>Liatris spicata</i> Dense Blazing Star	078	<i>Silphium laciniatum</i> Compass Plant
007	<i>Aronia prunifolia</i> Chokecherry	031	<i>Delphinium tricomre</i> Dwarf Larkspur	055	<i>Liatris squarulosa</i> Blazing Star	079	<i>Silphium terebinthinaceum</i> Prairie Dock
008	<i>Aruncus dioicus</i> Goat's Beard	032	<i>Delphinium tricomre alba</i> Dwarf Larkspur	056	<i>Lindera benzoin</i> Spicebush	080	<i>Smilacina spp.</i> False Solomon's Seal
009	<i>Asarum canadense</i> Wild Ginger	033	<i>Desmanthus illinoensis</i> Illinois Bundle Flower	057	<i>Lobelia cardinalis</i> Cardinal Flower	081	<i>Solidago riddellii</i> Riddell's Goldenrod
010	<i>Asclepias incarnata</i> Swamp Milkweed	034	<i>Dodecatheon meadia</i> Shooting Star	058	<i>Lobelia siphilitica</i> Great Blue Lobelia	082	<i>Solidago rigida</i> Stiff Goldenrod
011	<i>Asclepias syriacus</i> Common Milkweed	035	<i>Echinacea purpurea</i> Purple Coneflower	059	<i>Ludwigia alternifolia</i> Seedbox	083	<i>Sorghastrum nutans</i> Indian grass
012	<i>Asclepias tuberosa</i> Butterfly Milkweed	036	<i>Elymus canadensis</i> Canada Wild Rye	060	<i>Mitella diphylla</i> Mitrewort	084	<i>Spigelia marilandica</i> Indian Pink
013	<i>Asclepias verticillata</i> Whorled Milkweed	037	<i>Eryngium yuccifolium</i> Rattlesnake Master	061	<i>Monarda clinopodia</i> Bergamot, Bee Balm	085	<i>Stipa spartea</i> Porcupine Grass
014	<i>Aster puniceus</i> Bristly Aster	038	<i>Euonymus atropurpureus</i> Wahoo, Burning Bush	062	<i>Monarda fistulosa</i> Wild Bergamot	086	<i>Stylophorum diphyllum</i> Wood Poppy
015	<i>Baptisia australis</i> Blue Wild Indigo	039	<i>Eupatorium rugosum</i> White Snakeroot	063	<i>Panicum virgatum</i> Switch Grass	087	<i>Symphoricarpos albus</i> Snowberry
016	<i>Baptisia leucantha</i> White Wild Indigo	040	<i>Eupatorium serotinum</i> Late Boneset	064	<i>Penstemon digitalis</i> Foxglove Beardtongue	088	<i>Trillium flexipes</i> Declined Trillium
017	<i>Brachyelytrum erectum</i> Long-awned Wood Grass	041	<i>Gentiana andrewsii</i> Bottle or Closed Gentian	065	<i>Petalostemum purpureum</i> Purple Prairie Clover	089	<i>Trillium spp.</i> Various White Trillium
018	<i>Camassia scilloides</i> Wild Hyacinth	042	<i>Geranium maculatum alba</i> White Wild Geranium	066	<i>Physostegia virginiana</i> Obedient plant	090	<i>Vernonia spp.</i> Ironweed (various)
019	<i>Campanula americana</i> Tall Bellflower	043	<i>Gillennia trifoliata</i> Bowman's Root	067	<i>Polemonium reptans</i> Jacob's Ladder	091	<i>Viburnum acerifolium</i> Maple Leaf Viburnum
020	<i>Carex stipata</i> Common Fox Sedge	044	<i>Helenium autumnale</i> Sneezeweed	068	<i>Polygonatum spp.</i> Solomon's Seal (Various)	092	<i>Yucca smailiana (filamentosa)</i> Adam's Needle, Spanish Bayonet
021	<i>Carpinus caroliniana</i> Hornbeam	045	<i>Helianthus divaricatus</i> Woodland Sunflower	069	<i>Potentilla arguta</i> Prairie Cinquefoil	PLEASE LIST ALTERNATE SELECTIONS HERE	
022	<i>Cassia hebecarpa</i> Wild Senna	046	<i>Helioopsis helianthoides</i> Oxeye, False Sunflower	070	<i>Pycnanthemum virginianum</i> Common Mountain Mint		
023	<i>Celastrus scandens</i> Climbing Bittersweet	047	<i>Hepatica acutiloba</i> Sharp-Lobed Hepatica	071	<i>Ratibida pinnata</i> Gray-Headed Coneflower		
024	<i>Chasmanthium latifolium</i> Northern Sea Oats	048	<i>Hibiscus palustris</i> Swamp Rose Mallow	072	<i>Robinia pseudoacacia</i> Black Locust		

COMING ATTRACTIONS:

Wildflower Workshop

Thursday, May 7th, at McCormick's Creek State Park, Spencer, Indiana, sponsored by The Garden Club of Indiana. The workshop is intended to encourage use of native plants along our highways, and to encourage their propagation, conservation and use in our gardens, communities and wild areas.

The workshop will begin at 8:30 AM, and will feature presentations by four INPAWS members: Dan Anderson on wild edibles, Bill McKnight on exotic invasives, Dr. Vic Riemenschneider on plant identification, and Sue Nord on plant folklore. After lunch at the park Inn, a field trip will be led by park naturalists.

Registration, which includes lunch, is \$25.00, and must be made by April 18th. Please send your checks to Mrs. Wayne Huff, 3630 W. County Road 250N, Sullivan, IN 47882. If you wish to stay overnight at the park, please call the Canyon Inn at 812-829-4881 for reservations.

(Katrina Vollmer, President of The Garden Club of Indiana, is an active member of INPAWS).

Ritchey Woods Spring Flower Flings

are scheduled for April 18th and May 2nd, both Saturdays, at 11:00 AM. This will be an opportunity to visit the nature preserve of the Children's Museum at its location on Hague Road, between 96th and 106th Streets, in southern Hamilton County. The cost is \$5 for museum members and \$6 for non-members.

Please register at least a week in advance by calling 924-5431, extension 3826.

Spring Wildflower Pilgrimage

in Great Smoky Mountains National Park will be April 24-26. This will be an extensive series of walks and photographic opportunities led by experienced naturalists, with numerous choices each morning, afternoon and evening. (Tom Potter will be presenting workshops on nature photography). Cost of the program is \$8 per day, not including meals and lodging, for which arrangements must be made by participants. For more information and a program, please call 1-800-525-6834. A package tour from April 21-26 is being offered by Eagle Creek Park. The \$425 fee includes lodging for five nights, transportation and registration. A \$50 deposit is required. Please call the park office at 317-327-7148 for further details.

Division of Nature Preserves Field Trips

April 25

Portland Arch, 10 AM-12 PM, registration not required

June 13

Clark and Pine, Lake County, registration required

August 15

Bloomfield Barrens, Spencer County, registration not required

For directions or registration, call 317-232-4052.

Amos Butler Audubon Society

will hold its annual dinner at the Garrison, 6002 Post Road (Ft. Ben) on March 13th. Social hour begins at 6 PM followed by dinner at 7 PM. The featured speaker will be Peter Stangel presenting a talk on bird migration. Mr. Stangel is the director of the Neotropical Migratory Bird Conservation Initiative of the Fish and Wildlife Foundation. Should you receive the newsletter in time, cost is \$12.50, and reservations may be made by calling 317-254-0639.

Central Indiana Butterfly Club

Interested in butterfly gardening? Join members at 7 PM, April 14th, to hear INPAWS Vice President Kevin Tunesvick talk about butterfly gardening with native plants.

Location: Nora Library on E. 86th Street in Indy. Another presentation on a similar topic will be at Altum Gardens, Indianapolis, on April 25th at 1 PM. If you would like to know more about the CIBC, check their website at www.indynet.com/~burfish3/naba.cibc/index.htm

Wildflower Foray

will be held at T.C. Steele Nature Preserve on April 24-26th. The programs will include lectures, flower hikes, displays and good fellowship.



"At least two of the species of native orchids which grow on my property in Brown County, the crane fly orchid and the twayblade, did not flower this year where many had bloomed in previous years. Can I anticipate blooms in future years or have the plants probably died?"

Thanks, Ruth Ann Ingraham.

Send your answer (and other questions) to Editor Dan Anderson, 7412 Graham Road, Indianapolis, IN 46250.

Email Dan at danand@netdirect.net or email Anne Wilson at wilson@hsonline.net.

The Root of the Matter - Part II

I guess an edible wild plant enthusiast thinks more about roots after most of the greenery is withered and brown. For the last few years, I have had a few Evening Primroses (*Oenothera biennis*) in my wildflower garden, as I enjoy their spikes of yellow flowers. These plants, of course, are prolific in their reproductive capacity, and our vegetable garden, after the beans had gone, was literally covered with rosettes of the first-year plants. Since we had not intended to replant anything in the fall, I left them alone. After reading that the roots were edible, we pulled a quantity of them.

The size and shape resembled those of carrots. After cleaning and peeling, Sophia diced them, and they were boiled for 30 minutes with three

changes of water. Served with a white sauce, they were much like potatoes but with a slight peppery taste.

We had less success with Calamus or Sweet Flag (*Acorus calamus*). This plant, which is an arum, has leaves superficially resembling those of iris and a long horizontal rootstock which runs below the surface of the mud, putting shoots up every few inches. We processed the root similarly to that of primrose, but found the taste after cooking to be



somewhat medicinal and less than pleasing. It is said that the roots can be candied, but I'll stick with M and M's. Blue flag, a common wild iris, superficially resembles calamus (except when in bloom), but is toxic, so care should be taken to ensure that identification is correct!

Dan Anderson is newsletter editor and a confirmed wild-foods aficionado. Send your comments, recipes, results to danand@netdirect.net, or 7412 Graham Road, Indianapolis, IN 46250.

Book Review

by Ted Harris, Conservation Chairman

The Natural Heritage of Indiana

Edited by Marion T. Jackson,
Indiana University Press, 1997,
(ISBN 0-253-33074-2)

With its beautiful jacket and trim 12-inch length, *The Natural Heritage of Indiana* makes a striking first impression. Hundreds of handsome photographs, maps and diagrams will dazzle a prospective reader who riffles through the 470-plus pages. Still, this book's real power lies in the words of its authors.

Three dozen author-scientists have collaborated to produce fifty-seven chapters from scientific and historical per-

spectives. These writings fit together seamlessly, as though they were written by one person. The style is very readable, and can be enjoyed by people lacking a scientific background.

Various chapters cover Indiana's Ice Age history, its Pleistocene megafauna, wetlands, caves, prairies, forests, soils, rivers, mammals, birds, reptiles, fish, insects, trees, wildflowers, and much more. A compelling conservation message is expressed in many ways. The concluding chapters offer a prescription for what we need to do to protect, restore and connect Indiana's remaining natural areas.

The Natural History of Indiana is a great reference tool. More importantly,

it is a repository for its authors' knowledge and for their love of the natural world. It is a literary work of art. If you treat yourself to the purchase of only one book in 1998, this should be the one.

(This book was on sale at the INPAWS annual meeting and attracted a great deal of interest, including mine. Although, after much soul-searching, I opted for *Plants of the Chicago Region*, I heartily concur with Ted's opinion, and recommend the book. — Dan Anderson)

Letters . . .

Dear Ruth Ann,

I'm writing in response to your "Message..." on page 11 of the last INPAWS newsletter. Glory and I would like to volunteer our home, which we are landscaping with native plants, for INPAWS members to visit on an informal basis—"informal by prior arrangement." that is.

We have three acres in Bartholomew County, most of it shaded, with some fine, mature trees. We have both flat and sloped land, some quite steep, mostly clay soil but some that's rather sandy and some that's pure gravel. Almost all of it was mowed for 15 years before we bought it, and probably grazed before that.

Crossing our land is a seasonal water-course that is heavily flooded in spring, but dry in summer, and heavily shaded. I'd appreciate suggestions from INPAWS members for a shady, dry,

periodically flooded and somewhat erosive area. (I could sure use some *sunny* moist land.)

I've added eight species of native woody plants in and near the water-course, and have kept most of them. At the herbaceous layer, I've been less successful, but also maybe less necessary, as a lot of interesting stuff has reappeared on its own. Celandine Poppy, Virginia Bluebells, Bloodroot, Tradescantia, and tall Jewelweed are hanging on, among my recent re-introductions, but some others have melted away.

There's stiff competition from *Eupatorium rugosum*, or White Snakeroot (the plant that killed Abraham Lincoln's mother). The snake-root grows four feet tall by September; it spreads both by rhizomes and seed; and it's trying to take over the whole three acres. It makes Microsoft look like a fragile startup. I was amazed to see it

on Rolland Kontak's seed list—I'll give you some for free!

Glory and I have enjoyed our first six years of land reclamation here. Where one used to look out the windows at a vast, sterile lawn, we can now see graceful sweeps of *Eupatorium rugosum*. . . But by walking out and looking closely, we also see Trout Lilies, Blue-Eyed Grass, Solomon's Seal, Sweet Cicely, towering Wild Lettuce, and many more woodland wildflowers that survived the Lawnmower Era here. INPAWS members are welcome to come help us identify and enjoy them all.

Oh, yes, Abraham Lincoln's mother: she drank milk from a cow that had grazed on *Eupatorium rugosum*, and was poisoned. Quite a few settlers died that way.

Art Hopkins, Columbus



INDIANA NATIVE Plant and Wildflower Society

MEMBERSHIP APPLICATION/RENEWAL

Annual dues pertain to the fiscal year January 1 - December 31. Dues paid after September 1 are applied to the following fiscal year.

☐ Student \$10 ☐ Individual \$18 ☐ Family \$25 ☐ Patron \$100 ☐ Sponsor \$250 ☐ Corporate \$500
Supporter (Additional Donation) \$ _____ Total Enclosed \$ _____

NAME _____ TELEPHONE _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
COUNTY _____ ☐ NEW ☐ RENEWAL 3/98

How did you hear about INPAWS?

GIFTS DO HELP. INPAWS donors at the *Supporter, Patron, Sponsor* and *Corporate* levels will receive special recognition. All donations above *Student, Individual* and *Family* dues are most appreciated and can aid our mission. Donations are tax-deductible to the extent provided by law.

Please complete this form and mail, along with your check made payable to:

Indiana Native Plant and Wildflower Society, or INPAWS
c/o Michael Stiffler
2606 S 600 W
Morgantown, IN 46160.

I would like information on these committees:

- | | | |
|--|--|--|
| <input type="checkbox"/> Annual Meeting | <input type="checkbox"/> Hospitality | <input type="checkbox"/> Programs/
Field Trips |
| <input type="checkbox"/> Auction | <input type="checkbox"/> Membership | <input type="checkbox"/> Publications |
| <input type="checkbox"/> Conservation | <input type="checkbox"/> Native Plant
Education | <input type="checkbox"/> Publicity |
| <input type="checkbox"/> Demo Gardens | <input type="checkbox"/> Native Plant
Rescue | <input type="checkbox"/> Speakers
Bureau |
| <input type="checkbox"/> Fund Raising | <input type="checkbox"/> Newsletter | <input type="checkbox"/> Special
Projects |
| <input type="checkbox"/> Grants & Awards | | <input type="checkbox"/> Volunteers
Coordinator |
| <input type="checkbox"/> Historian | | |
| <input type="checkbox"/> Other | | |

1 9 9 8 I N P A W S E v e n t s

Saturday, March 21

Book signing with Marion Jackson, editor of *The Natural Heritage of Indiana*, who will talk about the construction of this wonderful book that was published last year. Cooper Science Building on the campus of Ball State University in Muncie - 2 PM.

Saturday, May 2

Spring wildflower hike at Carnes Mill Nature Preserve in Crawford county led by Roger Hedge, INPAWS corresponding secretary and Heritage Biologist with the Division of Nature Preserves. The preserve contains rich mesic forests, cliffs, hemlock trees and mountain laurel.

- details on all events to follow •
- Kevin Tungsick • 765-354-2775

Saturday, May 16

INPAWS plant auction and sale, Community Center, Augusta Christian Church, 3445 W 71st Street, Indianapolis.

- 10 AM • donations accepted;
- 12 PM • sale tables open;
- 1 PM • auction begins.

Saturday, June 27 and Sunday, June 28

Two-day bus trip to southwest and south central Indiana. On Saturday we will visit Section Six Flatwoods Nature Preserve and Twin Swamps Nature Preserve in southwest Indiana to see post oak flatwoods and cypress swamps respectively. We will overnight in Evansville and then visit Hemlock Cliffs and Boone Creek Barrens to see a variety of beautiful habitats on Sunday.

Saturday, August 1

Program on re-establishing native plant communities on your property. We will discuss converting portions of your property back to native vegetation. We will cover soil type, planting methods and maintenance. Location to be announced.

September ? (to be announced)
Seed and plant sale.

September ? (to be announced)
Mushroom hike at Guin Woods, a beautiful old-growth woods owned by Ball State University. Meet in Muncie to carpool to the site.

Saturday, November 14

INPAWS Fifth Annual Meeting, location to be announced.



INDIANA NATIVE
Plant and Wildflower Society

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INDIANA Native Plant and Wildflower Society

NEWS

Volume V Number 2

Summer 1998

Eight Ways to Protect Indiana's Native Flora

by Ted Harris

Do you remember the 1989 book, *50 Simple Things You Can Do to Save the Earth*? In fact, this book contains many more than fifty suggestions for reducing pollution and conserving resources. It is a useful primer for the "reduce, reuse, recycle" movement. The suggestions are good ones; but you could do everything the book recommends and still witness the slow decline of Indiana's native flora and fauna. For instance, "Plant a Tree" (Simple Thing #39) fails to distinguish between native and introduced species.

This column describes eight ways you can more directly protect Indiana's native flora. A common theme in these recommendations is the protection and restoration of natural areas: woods, wetlands and prairie remnants which are still the most important homes for native plants.

1 Buy an environmental license plate.

The Indiana Heritage Trust is an excellent program run by great people. I attended one of their committee meetings and saw their enthusiasm and their wonderful list of potential projects. The \$25 fee for the eagle-and-sun license plate supplies much of the funding. This program works in partnership with numerous other organizations, and combines with privately raised funds to acquire property from willing sellers. In its first five years, the Indiana Heritage

Trust has helped to add 17,000 acres to Indiana's system of parks, preserves and refuges.

2 Join The Nature Conservancy.

Dial 1-800-YES-LAND and you can speak with TNC's Indiana chapter office. TNC is the largest and one of the oldest land trusts in the country. As with other land trusts, donations to TNC are tax-deductible. TNC works in a non-confrontational way with organizations and individuals, on all levels. It has protected millions of acres in the United States and elsewhere. In Indiana, TNC has so far protected 158 properties totalling 35,000 acres. Over 14,500 Hoosiers belong to Indiana's chapter.

3 Join one or more of Indiana's regional land trusts.

These organizations work on a more local level than TNC, and can address smaller projects. The five land trusts listed below are each firmly established and are at work protecting natural areas within their regions. Most have only a few hundred members. By becoming a member/supporter, you can personally make a significant difference. In alphabetical order: ACRES (northeast) 219-422-1004; CILTI (central) 317-921-5528; NICHES (northwest) 765-583-2275; Shirley Heinze Environmental Fund (Lake Michigan area) 219-879-4725; Sycamore Land Trust (south) 812-336-5382.

4 Vote for conservation.

If plants and animals could vote, Nature would receive fairer treatment than it does currently. Conservation is a "back burner" issue for most voters and for most politicians. However, the fact remains that there are huge differences among politicians regarding their support of environmental issues. Politicians control lawmaking and also the release of funds supporting conservation projects in our state. When analyzing the track records of candidates, put "conservation" on your checklist of important concerns.

Eight Ways . . . continued on page 2

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5 Help control invasive exotics.

Garlic mustard is on a rampage this year. Many of our woodland areas are choked with bush honeysuckle. The threat to native plant populations is serious. Indy Parks, the Division of Nature Preserves, The Nature Conservancy, and others, frequently publicize volunteer workdays to control exotics. For your own education and amazement, participate in one of these events for a few hours, then show your friends what you learned. This problem needs help from all of us.

6 Oppose destruction of natural areas.

For instance: new highways, shopping centers and suburbs in the woods, conversion of wetlands to other uses, commercial timber-cutting in our national forests, open-pit mines, factory farms, landfills. Choose your "favorite" issue and let your voice be heard. Discuss your concern with your friends, organize people, sign petitions, write to the newspaper, speak at hearings. Our eco-

nomie system, wondrous though it is, places little value on nature for nature's sake. It is therefore our duty to be advocates for the natural world.

7 Become informed; stay informed.

This means more than reading just the *Indianapolis Star*, for example. Join organizations such as the Hoosier Environmental Council, 317-685-8800. Many of the national organizations produce very informative publications. Perhaps the best of these in terms of relevance and quality of writing is *Audubon*. Buy a copy at the newsstand. Subscribe to *Wild Earth*, 802-434-4077. Read Bill McKnight's *Biological Pollution*, Richard Primack's *Essentials of Conservation Biology* or Marion Jackson's *The Natural Heritage of Indiana*.

8 Restore a piece of nature.

It would help if you happen to own several acres of unused agricultural fields; but a few hundred square feet in your

back yard could be a start. After getting some native trees going, you will have a place to put INPAWS' plant rescue and auction plants. Or try some prairie species and let part of the area go through succession into woods. This is truly a "build it and they will come" project for all kinds of wildlife, and a source of endless entertainment for you. If you don't have land available for restoration, become a volunteer for The Nature Conservancy at their Kankakee Sands restoration. Jeffrey Maddox is in charge of this ecosystem-sized project. It will be many fun-filled years in the making.

I challenge every INPAWS member to become involved with three or four of these "eight ways." By so doing, our organization can be truly effective in conserving Indiana's native flora for many years to come.

Ted Harris is chairman of the Conservation Committee of INPAWS.

Indiana Native Plant and Wildflower Society Newsletter

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Published quarterly by the Indiana Native Plant and Wildflower Society for members.

The Mission of the Indiana Native Plant and Wildflower Society is to promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the values, beauty, diversity and environmental importance of indigenous vegetation.

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President's Message

by Ruth Ann Ingraham

As I composed my first two official president's messages, I allowed myself the pleasure of a stream of consciousness approach by expressing ideas I hold about our own gardens as well as what each of us can do to benefit public spaces and the ecosystem.

But now I want to write about down-to-earth, practical matters related to the inner workings of INPAWS.

First, Dan Anderson has resigned as our newsletter's co-editor. This current newsletter is his last, for now. So I want to write about Dan and what his volunteer service has meant.

In the spring of 1994 when Chris Carlson, our first editor, had to step down to devote more time to her business, Dan Anderson volunteered for one of the most important volunteer jobs in INPAWS, the editorship of the INPAWS newsletter.

During these four years, Dan has done a splendid job and delighted us with his articles on wild edibles. He worked hand in hand with Anne Wilson, who does our desktop publishing. Together Dan and Anne produced newsletters which have become increasingly informative, attractive, and highly regarded.

Dan serves INPAWS in many capacities and is one of our greatest boosters. He and his wife, Sophia, speak widely about native plants and hand out our brochures whenever possible. The two of them lead a Marion County Cooperative Extension 4-H unit on native plants and have influenced many young people.

Dan, I speak for all of us who read and enjoy the INPAWS newsletter when I say, "Thank you for a fantastic job. And may you now take time to smell the roses—or, more appropriately, gather wild edibles."

Secondly, I want to write about Rolland Kontak. Rolland is best known to many in INPAWS as our auctioneer. Under Rolland's tutelage, INPAWS has realized a significant portion of its income from our annual auction and plant sales. The proceeds from these events have enhanced greatly our ability to carry out our mission—among other things to educate people about native plants, to help preserve precious environments, to endow grants and awards, and to contribute to research in eliminating noxious invasives.

Rolland also single-handedly engineered our seed sale this past winter. He spent hundreds of hours collecting, sorting, cleaning, packaging and promoting native plant seeds. Dozens of you who purchased his seeds will have brighter environments in the years to come because of his efforts. All proceeds benefited INPAWS.

But Rolland cannot repeat this task alone. Since sources in Indiana for native seeds are rare and the demand is great, Rolland's labor of love was of tremendous significance. If we are to offer seeds again, Rolland will need helpers. If you have ideas or can help, contact Rolland or me. Without volunteers, we cannot repeat this effort.

Finally, I'm sure you know that INPAWS is committed to helping control exotic invasives or noxious weeds. Through our publications and field trips we have learned about Garlic Mustard, Amur Honeysuckle, Glossy Buckthorn, Purple Loosestrife. We have sponsored workdays to pull Garlic Mustard and worked with park managers to cut down Amur Honeysuckle. But our efforts are minuscule compared to the need and scope of the problem. Your INPAWS Board of Directors plans to create a standing committee on invasives. First,

we need volunteers on an ad hoc basis to help define the responsibilities of an Invasives Committee; Carolyn Bryson has volunteered to serve. That done, we will need a team of volunteers to go into action. We are not short on ideas, just people.

Please call, write or email me if you can help in any capacity. This is one of the most critical jobs facing the Indiana Native Plant and Wildflower Society.

In the meantime, be on the lookout for those destructive plants and do what you can to destroy them. In Brown County, one way or another, I'm eradicating Multiflora Rose, Japanese Honeysuckle, Periwinkle or Vinca minor and, this year, my first Garlic Mustard plant. The Brown County Democrat published my letter to the editor on the threat from a Garlic Mustard invasion. In Marion County I'm now watching for and pulling up *Euonymus* when I see it sprouting in our woods. In many areas it has already crowded out all native woodland wildflowers.



Twinleaf
Jeffersonia diphylla

Prescription for Plant Preservation

by Diane H. Stippler

Anyone who reads a newspaper, visits a bookstore, or listens to television news and magazine shows is aware of the current "herbal renaissance" in U.S. health care. Almost everyone now knows that St. John's Wort (*Hypericum perforatum*) is useful for mild to mod-



St. John's Wort
Hypericum perforatum

erate depression and that Purple Coneflower (*Echinacea spp.*) is the herbal treatment of choice for colds and flu (unless you have auto-immune disease). The latest hot herb on the scene, of course, is *Ginkgo biloba* leaf. Although Ginkgo is not native to Indiana, it is now being researched for use by Alzheimer's patients. David Hoffman, noted herbalist and environmentalist, in his *Holistic Herbal* reminds us that "the plant kingdom plays a profound role in human health and wholeness, the parameters of which we haven't even begun to glimpse." Botanical medicine and medical journals, along with the mass media, continue to release the health benefits of one plant after another.

Many of us were pleased to see "Indiana's own" Varro Tyler, pharmacologist and former Dean of

Pharmacy at Purdue University for 20 years recognized as an "author and expert on herbal medicine" in an article in *USA Today* (October 23, 1997). However, with the knowledge of the use of each medicinal plant has come an onslaught akin to the Gold Rush by an America greedy and irresponsible in harvesting these treasures in the wild. I recall the opening line of Charles Dickens' novel *A Tale of Two Cities*, "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness...it was the season of Light, it was the season of Darkness..."

On one hand, the U.S. population is catching up with the rest of the world and the early '70s "hippie" herbalists who already knew the health benefits of plants. Finally, we are returning on a



Purple Coneflower
Echinacea purpurea

grand scale to the utilization of the medicine that Earth provides for us in its natural form for the first time since the 1930s. On the other hand, the demand for plant-based medicine has created a stampede for a commodity of which there is a limited supply. For decades, herbalists, including those with whom I have studied, have taught

that wildcrafted herbs were superior to those cultivated. This idea resulted from the belief that the "vital essence" in the plant was as important as its medicinal constituent content, which can be higher in cultivated plants. At least in earlier times, the plants were harvested responsibly.



Blue Cohosh
Caulophyllum thalictroides

Whether you agree with the herbalists or not, the current situation is clear. Vast numbers of plants have been and continue to be taken, many irresponsibly. For example, many wildcrafters, especially beginners, may not be knowledgeable about the proper method in which or the proper time to collect herbs so that the active constituent is available as medicine. Some plants are not stored properly after collection. Added to this, whole plants are being destroyed while only one part of the plant might be necessary for medicinal use. All of this means that much of what is gathered is wasted. As it stands now, indiscriminate wildharvesting, deforestation, and urbanization have devastated many areas of former abundance—not only in the world's rain forests but right here in the good ol' U.S. of A.

Because of the resurgence in popularity of drugs from nature, many of our "plant brothers" are in danger of extinction. Of great concern particularly are medicinals native to the United States that are habitat-specific, have a limited growing range, and reproduce more selectively. Some of these, native to Indiana, include American Ginseng (*Panax quinquefolius*); Black Cohosh (*Cimicifuga racemosa*), the source of currently popular commercial Remifemin for treatment of menopause; Bloodroot (*Sanguinaria canadensis*); Blue Cohosh (*Caulophyllum thalictroides*); and Goldenseal (*Hydrastis canadensis*). They are found growing nowhere else in the world except in the United States and are in great demand by the herbal manufacturers and pharmaceutical companies both here and abroad.



Milk Thistle
Silybum marianum

In the *USA Today* article mentioned earlier, Doctor Tyler cited the Indiana native herbs Black Cohosh and Milk Thistle (*Silybum marianum*) within the group of plants he believes will become increasingly popular as the population ages. He also mentioned the medicinal use of St. John's Wort and Echinacea, also Indiana natives, as being backed by clinical evidence. This type of corroboration nationally, while instructional to the general public, only adds to

the problem of conservation by creating greater demand for these plants. Issues are being stirred up even among naturalists regarding the ethics of identifying such plants for the general public on nature walks for fear of plant theft following presentations. The growing awareness of the clinically studied medicinal values of so many plants presents us with yet another reason to be as active as possible in plant preservation projects. This knowledge also brings up the importance plant nurseries that propagate and sell native flora play in this arena. We must encourage and support these businesses so that our medicinal plants do not become extinct as "stealing" from the wild becomes more popular. It is not enough to think we're making advances when the state of Indiana enacts "hand-slapping" laws against pilferage of goldenseal, for example, from state parks.

There is another way, too, to join in this conservationist fight. A new, non-profit, national grassroots organization, *United Plant Savers*, sprouted up in our country in 1994 to preserve our native medicinal plant species. Its focus is on organic cultivation, sustainable agricultural practices, and the replanting of native medicinal species into their natural habitats. The group reflects a great diversity of American herbal enthusiasts and includes wildcrafters, seed collectors, manufacturers, growers, botanists, practitioners, medicine makers, educators, and plant lovers from all walks of life. Current activities include compiling a resource listing to locate nursery-grown and/or organic stock of these endangered plants and establishing botanical sanctuaries (à la the vision of T.C. Steele's wife Selma to provide a "sanctuary of the future" in her garden just outside Nashville, Indiana). The organization is also sponsoring such projects as the planting of more than 5,000 Goldenseal roots by members across the nation last year and is working to identify "at risk" native American medicinal plants.

Three plants, alternatives chosen by committee under the direction of the Indiana Academy of Science to replace the current Indiana state flower (the Peony, a native of China) are on the United Plant Savers' potential "at risk" list or are being considered strongly for inclusion on it. These are Cardinal Flower (*Lobelia cardinalis*); Butterfly Milkweed (*Asclepias tuberosa*); and Bloodroot (*Sanguinaria canadensis*), the rhizome of which is used primarily for bronchitis.



Bloodroot
Sanguinaria canadensis

Jan Glimn-Lacy

Some of you may have picked up materials on United Plant Savers at the INPAWS Annual Meeting in November. If you did not do this, but would like more information on U.P.S. or on a \$35.00 membership, you may write to them at P.O. Box 420, East Barre, VT 05649, call (802) 479-9825, fax (802) 476-3722 or email info@www.plantsavers.org. You can also visit their website at <http://www.plantsavers.org>.

Diane Stippler, a member of the American Herbalists Guild, is an environmentalist, writer, and is proud also to be a member of both INPAWS and U.P.S.

M U L T I F L O R A E

Speakers Bureau

Welcome to the two new members of the bureau—Sophia Anderson and Emily Woodworth-Roark. Recently Hilary Cox spoke to the Brown County Garden Club for INPAWS.

Native Prairies to Visit at INPAWS Members' Homes

Marion County
(north of Eagle Creek Park)
Bob and Lou Rice invite you on August 1st at 10 AM to visit their prairie sites. Please call Bob at 291-5328 at least five days before for directions, as there is bridge construction going on. The Rices invite you to bring your own picnic lunch, and they will provide drinks after the tour. Ten acres of tall prairie grasses and forbs have been planted, and many other native species have reappeared. The prairies were planted to attract birds and butterflies. Bob has kept records of the plants, animals and insects present before and after establishment. Don't miss this chance to see and learn tips first-hand from Bob!

Morgan County

Ron and Carolyn Voegelé invite you to call 765-342-0608 and set up a visit on an individual basis. Ron has four prairie plots 15x40 feet in size, started over the past four years, which contain more than 70 species of forbs and grasses. "Over 100 true native prairie plants in one location," says Ron. Last time I called him, he was out planting still more!

Colletta Kosiba 317-852-5973

Update on Plant Collection in National Forests

The collection of **Goldenseal** (*Hydrastis canadensis*) and **Ginseng** (*Panax quinquefolius*) is **no longer** permitted in national forests **under any circumstances**. Steve Olson, Hoosier National Forest Botanist, called to clarify this policy, which is consistent with the state of Indiana's policy on collection as well. In fact, there is sufficient concern regarding overharvesting for CITES (Council on International Trade of Endangered Species) to monitor trade in these two species.

For more information contact

Steve Olson
Tell City Ranger District
248 15th Street
Tell City, IN 47586
(812) 547-7051.

(Please see also *Prescription for Plant Preservation* on page 4.)



NATURE WALKS AT BUTLER UNIVERSITY

Dr. Rebecca Dolan, Director of the Friesner Herbarium at Butler University, will be leading tours on the Butler campus on the following Tuesdays at noon:

July 14

Butler Prairie, view 1

August 11

Butler Prairie, view 2

September 8

Butler Prairie, view 3

Meet behind Gallahue Hall near the greenhouse. Tours will last about 40 minutes. There is no charge and all are welcome.

If you would like to receive a monthly reminder of the walk, or wish to be dropped from the reminder list, please call Dr. Dolan at 317-940-9413, or email rdolan@butler.edu.

<http://www.inpaws.org>

Visit our website for news and information about INPAWS and native plant issues, as well as links to a wealth of like-minded organizations.

We would like to update our site with **your** news, information, comments, ideas, opinions, suggestions, in short, anything of interest to all concerned with preserving native plants and their habitats.

Please email Anne Wilson • wilson@hsonline.net.

Another Successful Spring Plant Auction!

A very special *thank you* goes to Augusta Christian Church for giving us use of their Community Center free of charge for our May 16 auction and sale.

As usual, this auction went very smoothly due to the diligent efforts of our volunteers. A big thank you to: Carolyn and Don Bryson, Annie Cox, John and Shirley Cain, Rob Day, Ruth Ann Ingraham, Rolland and Mildred Kontak, Helen Merrill and her son,

Charles and Marilyn Spurgeon, Kevin Tunesvick, Mary Welch-Keesey, Jean Vietor, Katrina Vollmer and Bonnie Carter.

Business contributors donated much to the success of our auction. They were: Spence Nursery, The Garden Center (formerly Scott's Garden Center), DesignScape, Wild Birds Unlimited, and Munchkin Nursery.

Dianna Zamani, Auction Chairman

We would also like to thank all of you who donated your marvelous plants; without you there would be no auction. And, thanks to those who donated cookies.

And once again, we are grateful for the expertise and dedication of Rolland Kontak, our auctioneer extraordinaire, and Mildred Kontak, auction recorder.

Hope to see all of you at the next sale, Saturday, August 29. Details to come.

Funds Available Through INPAWS Small Grants Program

INPAWS is initiating a small grants program to support projects that are in line with the mission of the society. Toward that end, the Board voted last year to allocate \$10,000 from the general fund to an endowment account. Interest from this account will be available for grants. The Awards Committee anticipates funding two grants of up to \$300 each during 1998.

We hope that these small grants will be used in conjunction with other sources of funding for project enhancement such as signage and brochures, special plantings or purchase of native seed stock.

Applications are requested from groups or individuals and must be post-marked by September 1, 1998. They will be

reviewed by the committee. Successful awardees will be announced at the Annual Meeting in November.

Following are the application procedures/requirements for the *INPAWS Small Grants Program*:

1. Cover sheet including

- Name of project
- Amount requested
- Location
- Applicant/contact person name, address, telephone
- New or existing project
- Category that best describes the project: research, training, education, conservation and habitat, demonstration garden, etc.

2. Text of proposal

(not to exceed 2 pages)

- a) A summary of the project, not to exceed fifty words
- b) A clear, concise description of the project which includes the following:
 - How does the project further the INPAWS mission?
 - Why is the project needed?
 - Specific objectives to be achieved
 - Specific information on how INPAWS grant funds would be used
 - Who benefits from the project? How many? How do they benefit?

- Names of organizations involved, if any, with a brief description of each, including number of members
- Financial resources committed to the project from other sources, if any
- Anticipated starting and completion date of the project

3. Budget sheet showing:

- a) Labor, material and program costs
- b) Sources and amounts of funds already raised, if any
- c) Total cost of project

Fifty percent of funds awarded will be available at the start of the project, 50% upon receipt of a final report by the Awards Committee. In addition, successful awardees must prepare a poster or other presentation to share with the membership at the Annual Meeting subsequent to completion of the project.

Mail four copies of the grant proposal post-marked by **September 1, 1998** to Dr. Rebecca Dolan.

Larger Grant Awards

At the discretion of the Board and membership, larger awards may be made from time to time from the assets of the operating budget. Requests for funds for special projects may be made at any time to the Executive Committee. All requests must be made in writing with a clear statement of how the award would further the mission of INPAWS and benefit our membership.

Dr. Rebecca Dolan
Director, Friesner Herbarium
Butler University
4600 Sunset Avenue
Indianapolis, IN 46208

317-940-9413
317-940-9519 FAX
rdolan@butler.edu



Send us your favorite sources for native plants and related businesses.

INPAWS will be publishing its first ever source directory in 1999 and is in the process of compiling lists of businesses that specialize in the use of plants native to Indiana. Some of the categories are:

- plant nurseries—wholesale and retail
- landscape architects
- landscape designers
- prairie, wetland and woodland habitat restoration specialists.

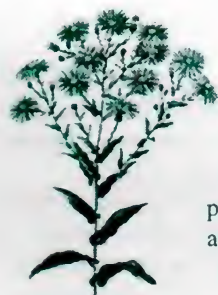
If you would like to be included in the directory, or know of a business we should consider, please contact us by August 15, 1998.

Rob Day, Special Projects Chairman
6095 Ralston Avenue
Indianapolis, IN 46220
317-253-9000 • fax 317-253-9900
email rob@robday.com

Recent Goings-On

by Dan Anderson

1998 hasn't been an ordinary year so far. Everything in my garden and in the several woods I have visited seems to be running about two weeks ahead of normal. As I write this (early May) the wild hyacinths are opening up and the sweet cicely is starting to bloom. The false Solomon's seal is almost at full height and the terminal buds are swelling. Buds on the blackberries are swelling.



New England Aster

Last fall I collected a variety of seeds in the wild, and added a few packets of INPAWS seeds purchased at the annual meeting. After subjecting them to ambient temperature over most

of the winter, I sowed some outside and tried to start the rest in seed-starter mix, under a grow lamp. After six frustrating weeks of TLC, I had a bunch of spindly evening primrose, a reasonable number of purple coneflower and a few wing-stem and gray-headed coneflower. Of the 200 or so purple and swamp milkweed seeds I had collected—nary a sprout. Same for the great lobelia, cardinal flower and New England Aster.

Numerous "pups" of bloodroot, twin-leaf, and Jacob's-ladder are appearing in my wildflower garden, some of which will make it to the INPAWS plant sale, along with some Green Dragons which I have rescued from our woods before the deer had a chance to eat them. I did notice that a few others may possibly have a virus disease, showing a network of lighter areas in the leaves. Has anyone else noticed this?

The Wildflower Foray at T.C. Steele Nature Preserve was a great success, possibly due to the excellent writeup in the *Indianapolis Star*. Among the hike

leaders were Ellen Jacquart, Roger Hedge and Dr. Kay Yatskievich, along with the resident naturalists. Kay assured me that her book on Indiana wildflowers is almost done, but offered the consolation that another volume of hers on the botany of Venezuela has been published. There were about twice as many attendees as there were last year, and several groups had to be split up. Several highlights for me were seeing two hillsides covered with clumps of twinleaf, finding a small patch of goldenseal, and seeing some fire pink in full bloom.

Orchard in Bloom got off to a rainy start for the third or fourth year in a row, but that didn't stop Hilary Cox and many other INPAWS members from setting up a beautiful INPAWS micro-garden. Our thanks to Gene Bush, of Munchkin Nursery, for letting us have some beautiful specimens on consignment, and donating many others to the INPAWS Plant Sale and Auction.



Green Dragon

I seem to notice more wild leeks each year in areas where I volunteer—has anyone else noticed the same thing? Of course, garlic mustard seems to be thriving also, and pulls have been held at Brown County State Park, Broad Ripple Park and Holliday Park in Indy, the latter attracting about 35 eager volunteers. Park Naturalist John Schaust is happy that the pest has been at least temporarily eradicated in a number of critical areas.

The morel season is just about over, and Sophia and I haven't found a large number, but this year the yellow morels we found were of jumbo size. We also found some oyster mushrooms, and sampled a common polypore (*Polyporus squamosus*) that is reported

to be edible. Sophia selected what appeared to be the tenderest parts. After cooking, some pieces were pleasant-tasting if chewy, and others were too tough to swallow.

Another successful event was the Garden Club of Indiana's *Wildflower Workshop*, held at Brown County State



Morels
by Sophia Anderson

Park on May 6th. INPAWS members Helen Merrill, Amy Mason and Katrina Vollmer have been active in the event, which drew more than 60 interested gardeners from all

over the state. The heavy rains made traveling difficult, but didn't discourage many of the conference participants, who ventured a nature hike at 3:00 PM, when the rain let up for a while.

The following programs were presented. *Wild Edibles*, by Sophia and Dan Anderson, featured slides, specimens and many tasty samples. Sue Nord showed many flower slides, with a description of the uses of each, particularly the medical properties. After lunch, Bill McKnight hauled in his bags of garlic mustard, honeysuckle, vinca and other undesirables, and discussed the nature of invasive plants and the desirability of planting native species. The final presentation, *What Plant is That*, was given by Dr. Victor Riemenschneider, who discussed the use of keys in plant identification, and showed many variations of flower form and structure. A wide variety of free information was offered, and there seemed to be a great deal of interest in INPAWS among the attendees who were not already members.

We look forward to a continuation of Dan's series Free for the Picking, as well as his observations in general.

Carnes Mill Field Trip almost ruined by native inhabitant.

A small group turned out for the May 2nd trip to this beautiful nature preserve along the Little Blue River in Crawford County, led by DNR Heritage Biologist and expert botanist Roger Hedge.

On the way to the site hundreds of rare French's Shooting Stars (*Dodecatheon frenchii*), designated of "federal concern," were spotted on sandstone ledges (the plant's only habitat).

Near the mill, our good intentions of pulling out a patch of Japanese honeysuckle overtaking a rocky ledge almost ended badly for our President Ruth Ann Ingraham. After being urged to "keep pulling," Ruth Ann dutifully reached under the leaves to get at the roots of the noxious weed, when she startled a resting Copperhead (*Agkistrodon contortrix mokasen*), who didn't seem pleased. Luckily, we did not need the expertise of herpetologist Sherman Minton in treating a snakebite. He had ironically turned back on the trail a little earlier and never got to see the handsome reptile who

quickly retreated after rearing its head and evaluating the situation.

We were very happy to make the acquaintance of four members of the Cincinnati Wildflower Preservation Society, led by Dr. Victor Soukup who is president of the society and an INPAWS member as well. He wrote:

It was great getting together at the Carne's Mill property. Enclosed is the list of significant plants we saw. Most citations are of blooming plants but some, of course, were not blooming. The latter are listed because they elicited considerable comment. Not listed is Staphylea trifoliata (Bladder Nut) the shrub which was mentioned several times. . .

P.S. A brief search of the literature did not turn up any references to Synandra hispidula with purple buds (resulting in floral parts with lavender backs. This is most probably a first finding of this color form.

Plants seen at Carne's Mill on 5/2/98:

Phlox (divaricata or pilosa or both), Geranium maculatum, Delphinium tricornis, Senecio aureus, Isopyrum biter-natum, Podophyllum peltatum, Jeffersonia diphylla, Actaea pachypoda, Polemonium reptans, Dentaria heterophylla, Viola striata, Trillium recurvatum, Trillium sessile, Trillium flexipes, Stellaria media, Valeriana pauciflora, Stylophorum diphyllum, Phacelia bipinnatifida, Hydrophyllum appendiculatum, Hydrophyllum canadense, Mertensia virginica, Clematis virginica, Allium tricoccum, Asarum canadense, Smilacina racemosa, Polygonatum sp., Arabis (laevigata or canadensis), Solidago flexicaulis, Mitella diphylla, Aquilegia canadensis, Blephilia hirsuta, Hepatica acutiloba, Osmorhiza longistylis, Synandra hispidula.

Ferns: Glade, Silvery Glade, Marginal, Christmas, Bulblet, Fragile, Sensitive, Broad Beech, Maidenhair, Polypody, Resurrection and Goldie's.



INDIANA NATIVE PLANT and Wildflower Society

MEMBERSHIP APPLICATION/RENEWAL

Annual dues pertain to the fiscal year January 1 - December 31. Dues paid after September 1 are applied to the following fiscal year.

☐ Student \$10 ☐ Individual \$18 ☐ Family \$25 ☐ Patron \$100 ☐ Sponsor \$250 ☐ Corporate \$500
Supporter (Additional Donation) \$ _____ Total Enclosed \$ _____

NAME _____ TELEPHONE _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
COUNTY _____ ☐ NEW ☐ RENEWAL 6/98

How did you hear about INPAWS?

GIFTS DO HELP. INPAWS donors at the *Supporter, Patron, Sponsor* and *Corporate* levels will receive special recognition. All donations above *Student, Individual* and *Family* dues are most appreciated and can aid our mission. Donations are tax-deductible to the extent provided by law.

Please complete this form and mail, along with your check made payable to:

Indiana Native Plant and Wildflower Society, or INPAWS
c/o Michael Stiffler
2606 S 600 W
Morgantown, IN 46160.

I would like information on these committees:

- | | | |
|--|--|--|
| <input type="checkbox"/> Annual Meeting | <input type="checkbox"/> Hospitality | <input type="checkbox"/> Programs/
Field Trips |
| <input type="checkbox"/> Auction | <input type="checkbox"/> Membership | <input type="checkbox"/> Publications |
| <input type="checkbox"/> Conservation | <input type="checkbox"/> Native Plant
Education | <input type="checkbox"/> Publicity |
| <input type="checkbox"/> Demo Gardens | <input type="checkbox"/> Native Plant
Rescue | <input type="checkbox"/> Speakers
Bureau |
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Projects |
| <input type="checkbox"/> Grants & Awards | | <input type="checkbox"/> Volunteers
Coordinator |
| <input type="checkbox"/> Historian | | |
| <input type="checkbox"/> Other | | |

1 9 9 8 I N P A W S E v e n t s

**Saturday, June 27 and
Sunday, June 28**

Two-day bus trip to southwest and south central Indiana. On Saturday we will visit Section Six Flatwoods Nature Preserve and Twin Swamps Nature Preserve in southwest Indiana to see post oak flatwoods and cypress swamps respectively. We will stay overnight in Evansville and then visit Hemlock Cliffs and Boone Creek Barrens to see a variety of beautiful habitats on Sunday.

Saturday, August 1

Program on re-establishing native plant communities on

your property. We will discuss converting portions of your property back to native vegetation. We will cover soil type, planting methods and maintenance. Location to be announced.

Saturday, August 29

Seed and plant sale, time and location to be announced.

Saturday, September 12

Mushroom hike at Guin Woods, a beautiful old-growth woods owned by Ball State University. Meet in Muncie to carpool to the site.

Sunday, October 18

Fall plant identification hike at Scott Starling Nature Sanctuary at the north end of Eagle Creek reservoir. Learn to identify all of those annoying plants that stick to your socks!

Saturday, November 14

INPAWS Fifth Annual Meeting, location to be announced.

More information to follow.
Kevin Tunesvick
765-354-2775



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and Wildflower Society

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Indianapolis, IN 46220

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INDIANA Native Plant and Wildflower Society

NEWS

Volume V Number 3

Autumn 1998

Going Native on the Monon

by Don Miller

The old Monon Railway—definitely a part of Indiana Heritage. I remember going with a friend to a Monon meeting in Indianapolis about twenty five years ago. These train enthusiasts wore authentic clothing, and had Monon knives, watches, pictures, model trains, and told stories about better days. Still only in my early teens, I didn't know what to think of these people.

It was as if they walked right out of the rail yard after a day's work. The older men who drove the engines seemed to have the best stories. I remember the engineers reminiscing about the grandeur of lightning storms, prairie fires, and something about hawks dropping snakes on the front of the engine—which apparently happened more than once. The historic railway came to Indianapolis in 1882 and ran for one hundred five years, linking nearly three hundred miles of track in Indiana. My own interest in railroads waned after working ten years in a rail-car repair shop.

My next experience with the Monon railway was as the Land Steward for Indianapolis Parks (Indy Parks), clearing the overgrown corridor of invasive exotics after nine years of abandonment. Amur honeysuckle (*Lonicera maackii*), Tree of Heaven (*Ailanthus altissima*), and White Mulberry (*Morus alba*) were cleared in 1996 so engineers could start design of an alternative transportation corridor called the Monon Trail.

"Linking neighborhoods to nature" is the slogan for the Indianapolis

Greenways system, which includes the 7 1/2 mile asphalt Monon Trail that now lies atop the old rail corridor. The trail starts on the northern county line at 96th Street, passes near the Marott Park Nature Preserve at 75th Street, goes down through Broad Ripple at 62nd Street, crosses over 38th Street as it leaves the Indiana State Fairgrounds and terminates at the Fall Creek Bridge (links to Fall Creek Greenway in Fall 1999). The hard surface trail allows walkers, rollerbladers and bicyclists the rare opportunity to relax and exercise in relative comfort without the danger, noise or fumes encountered when sharing the street with a truck or car. As far as a natural trail—this perception is in the eye of the beholder. In a popular Indianapolis weekly newspaper, an author interprets nature and his experience on the Monon Trail. His trail-side ecology discussion unknowingly describes Garlic Mustard (*Alliaria petiolata*), Japanese Honeysuckle (*Lonicera japonica*), and bush honeysuckle (*Lonicera sp.*) as being part of the natural habitat for birds and chipmunks.

A series of new native landscape plantings and interpretive signs are drawing some people off the Monon Trail to take a closer look. Since 1996, the Land Stewardship section of Indy Parks has installed 45,000 native flowers, grasses, rushes, sedges, trees and shrubs, using INPAWS members and other volunteer groups.

We started the native landscaping program in earnest after seeing Neil Diboll's presentation on prairie plants at

the 1995 INPAWS Annual Meeting. Several experiments in 1994 seeding small prairie plots were so unsuccessful that we didn't try again in 1995. In 1996 we found that live plant plugs were very effective for smaller applications, although not completely fool-proof. Several attempts were less successful because of the large weed-seed bank in the soil and the lack of proper maintenance until establishment.

Finally in 1997 we learned our lessons and really began to turn out some very good projects. We contracted Spence Restoration Nursery to visit the sites and prepare an appropriate native plant list for each site. Our planting methods are outlined in the following steps:

Going Native . . . continued on page 2

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1) Kill existing vegetation by several timed applications of glyphosate herbicide and have area checked for buried utilities.

2) Spread approximately two inches of black, weed-free leaf compost (hardwood mulch is inferior).

3) Use a small one-person gasoline auger to drill through the compost into the soil on one-foot centers in a checkerboard pattern, and arrange the pots in the holes.

4) Remove plants from pots and plant at correct depth, tamping plug firmly to eliminate air gaps.

5) Water plugs deeply until roots are established (about 2-3 weeks).

6) Keep site relatively weed-free by hand-pulling or applying a pre-emergent herbicide to the compost (follow label instructions). The plants may bloom the first year a little if planted early, but the second year bloom will be tremendous.

From our experience it is very important to avoid mowing the plants. Accidental mowing encourages weed

growth and delays the establishment of the planting bed. At Indy Parks there are so many sites that we have almost constant trouble with workers mistaking the native planting beds for weeds. First-year plants and early season (non-flowering) planting beds are especially vulnerable to accidental mowing. If you don't mow your own lawn, make extra efforts to mark the planting well and you will avoid a lot of personal frustration!

There are some good examples of native plantings on the Monon Trail that readers may want to visit this fall. Just north of 65th Street on the Monon in Broad Ripple is a long flat native plot about 400 feet long and six feet wide, with 2500 plants representing 15 species. Parking for this site is on the west side of the Monon at 65th Street across from the Brew Pub (65th and Cornell).

Another Monon planting was installed at a side access trail and overlook area. This project was funded by an IPALCO Golden Eagle Grant and planted by volunteers from the Sierra Club Heartlands Group. Parking is available off 75th

Street on the west side of the Monon (75th and Westfield). It is accessed by walking south on the Monon approximately two-tenths of a mile, turning right on a wide limestone trail. The planting can also be viewed from the top of the trail from the red bridge which crosses the White River Bypass. Total planted area is roughly 1600 square feet which includes the east and west sides of the trail.

Late-flowering species on both Monon sites are the New England Aster (*Aster novae-angliae*), Smooth Aster (*Aster laevis*), Heath Aster (*Aster ericoides*), and Riddell's Goldenrod (*Solidago riddellii*). Both sites are doing extremely well despite being planted into limestone railroad ballast and poor soil. The sloped area at 73rd is fill material which was dumped over the side of the railroad bed when the trail was graded.

Some of the same prairie species planted along the Monon in Indianapolis can be seen growing naturally along the Monon in the prairie counties farther north. Those who attended the INPAWS field trips in the Dunes area may remember Kevin Tunesvick

Going Native. . . continued on page 3

Indiana Native Plant and Wildflower Society Newsletter
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Published quarterly by the Indiana Native Plant and Wildflower Society for members.

The Mission of the Indiana Native Plant and Wildflower Society is to promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the values, beauty, diversity and environmental importance of indigenous vegetation.

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Bonnie Carter	(317) 769-5034
Speakers Bureau	
Colletta Kosiba	(317) 852-5973
Special Projects	
Rob Day	(317) 253-9000
Volunteers Coordinator	
Katrina Vollmer	(812) 988-0063
Muncie Chapter	
Kevin Tunesvick	(765) 354-2775
Past Presidents	
Jeffrey Maddox	(317) 253-0659
Carolyn Harstad	(317) 257-9452

President's Message

by Ruth Ann Ingraham

I do not think of myself as a team player—as in football, baseball and those sports that require physical coordination. However, at the close of summer and the beginning of fall I can't avoid being aware of teams. For most of the past 50 years I have lived in the Broad Ripple area of Indianapolis and within earshot of Broad Ripple High School. At this time of year I see and hear the football team working out to build stamina and practice strategy. And some evenings I can hear the voice of the game's announcer cutting through the cool air, relaying information about the plays and announcing touchdowns and scores. And I hear the fans cheer their teams.

Team efforts are dynamic and exciting and many games cannot be played without a team—a group of people on the same side.

The Indiana Native Plant and Wildflower Society is a team composed of more than 500 individuals who support its mission; we exercise our intellectual muscles and occasionally our digging muscles to move us toward our objectives. Dozens of us donate time and expertise.

The current INPAWS game plan is dynamic:

- We are formulating a resource booklet about Indiana's native plants.
- We are focusing on the challenge of how to beautify Indiana with native plants and wildflowers at our next annual meeting on November 14.
- We design programs, field trips, presentations, demonstration gardens and

visits to members' gardens to promote a deep understanding of the value of native plants and their interrelationship with the surrounding ecosystem.

- We research issues and communicate to legislators our concerns about damage to and conservation of the natural environment.
- We share our native plants through our auctions, sales and plant rescues so that others may learn about and enjoy them.
- We endowed a grants and awards program to support projects in keeping with our mission.
- We maintain a website — www.inpaws.org.
- We are learning about conservation easements and protection of lands in perpetuity for those of us who have precious natural environments to save for future generations.
- We spread the word about noxious invasive plants and teach others to recognize and exterminate them.
- We promote local chapters; the Muncie Chapter is a shining example.
- We promote our efforts through our quarterly newsletter and through items which we sell bearing our logo.
- INPAWS has teamed with other organizations and non-member individuals to strengthen our impact.
- INPAWS is part of the Indiana Coalition of Teaming With Wildlife. Habitat preservation and environmental education rank high among concerns expressed recently by representatives of the more than 50 member groups.

www.teaming.com has more information about Teaming With Wildlife.

- INPAWS is a cooperator with Oakhurst Gardens in Muncie, The Nature Conservancy and the U. S. Fish and Wildlife Service to develop the Integrated Environmental Curriculum Prairie Component for grades K–12.
 - INPAWS joined 10 other organizations and dozens of individuals in accumulating the funds needed to purchase Burnett Woods Nature Preserve, central Indiana's newest. This effort was spearheaded by the Central Indiana Land Trust, Inc.
 - INPAWS belongs to the Native Plant Conservation Initiative which funds plant conservation projects. Annual grants are available for projects that involve as many of its agencies and cooperators as possible and which are short-term, on-the-ground conservation projects. Our website provides a link to the NPCI.
 - INPAWS joined others by contributing to research into the use of biological controls to slow the advance of garlic mustard, a deadly enemy of eastern U.S. forests and woodlands.
- It takes a team to carry a football across the goal line and score a touchdown.
- The 1998 INPAWS member directory and the lead article in the INPAWS Summer 1998 newsletter enumerated simple ways that we as individuals can make a difference. But individuals and organizations teaming together can be formidable and will achieve many more goals.

Going Native. . . continued from page 2

pointing out the prairie plants on the bus as we sped alongside the CSX (former Monon) railroad tracks coming home. There are some other prairie remnants about 35 miles northeast of Indianapolis along the railroad tracks east of Mounds State Park in Anderson,

Indiana. Though Indianapolis was mostly forested with some open wetlands, it seems fitting that prairie vegetation be used to help reclaim this highly disturbed right-of-way along the Monon Trail.

I would be happy to send digitized color pictures of the Monon plantings

and examples of other native landscaping sites via e-mail attachment to those interested. Send requests to dmiller@indygov.org.

Don Miller is the Land Stewardship Coordinator for Indy Parks and a member of INPAWS.

Willow Soup

A Spring Tonic for your Garden

by Bobbi Diehl

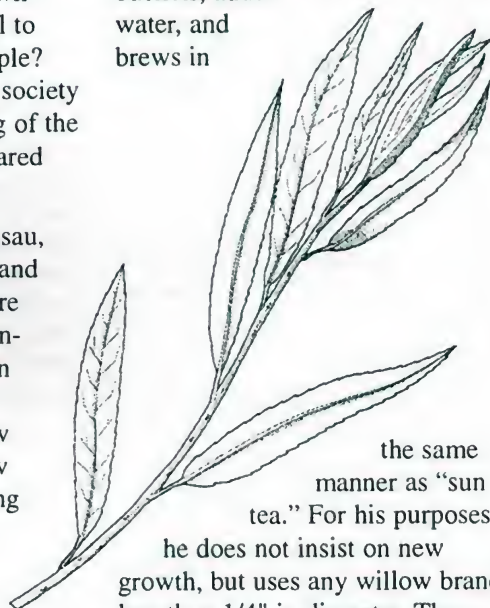
The painkilling properties of willows have been utilized by humans for centuries wherever the genus *Salix* occurs. North American Indians and pioneers, for example, chewed on willow bark to relieve pain. But did you know that willow's properties are beneficial to other plants as well as to people? The topic came up at a hosta society meeting around the beginning of the year and several members shared their gardening experiences.

Claire Peplowski of East Nassau, NY reported that her mother and German-born grandfather were enthusiastic and thrifty gardeners who used cuttings from an ordinary weeping willow to make what they called willow soup. They used only the new growth, chopping and mashing it up, filling a pail with the willow bits, and adding water to cover. After a few days, they used the resulting "soup" as a propagation aid. Cuttings of roses, shrubs, and fruit trees struck more quickly if watered in with this willow soup. So did the geranium cuttings they rooted for their window boxes. If a particular plant was doing poorly and seemed weak, a willow cutting was temporarily placed next to it in the soil and it would often revive.

Claire's grandfather had learned much of what he knew about gardening before he left Germany, and these tricks with willow were commonly practiced in that country.

Hank and Jane Unger-Millhorn of Hootowl Hollow Nursery in New

Marshfield, Ohio regularly make batches of willow soup, which they call willow tea. Hank has an endless supply of what the locals call "thet durned ole brainche willer," and he tosses cuttings into buckets, adds water, and brews in



the same manner as "sun tea." For his purposes he does not insist on new growth, but uses any willow branch less than 1/4" in diameter. The water takes on an amber color over time as the shoots soak and begin to root. Hank keeps three to five buckets of this tea going all season and uses it as a foliar spray on azaleas and rhododendrons to improve the color and sunfastness of the blooms ("better than Miracid").

He also spritzes hosta and daylily seedlings with it every two weeks. He uses it as a soak for new bare-root plants, especially if they look a little tired after their trip in that big brown truck ("even known to revive plants from Michigan Bulb Co.!"). And he too notes that cuttings watered with this tea root faster.

It seems to be fairly common knowledge that an aspirin (acetylsalicylic acid, the artificial equivalent of willow) dissolved in a vase with cut flowers prolongs their life in the house. Adding a little "willow soup" or a couple of willow twigs to the water in the vase would do the same thing—in fact, Hank thinks the willow works a bit better. Hosta blooms can be spectacular in arrangements, but they do not last particularly well when cut. I intend to try some willow twigs or soup with an assortment of cut flowers this year.

Experts seem to differ on how many species of willow there are—somewhere between 80 and 150, perhaps. Cuttings from any available willow can be used as a plant tonic, including pussy willow (*Salix discolor*), shining willow (*S. lucida*)—both American natives—or any of the European or Asian willows. There is a striking and decorative form of the common weeping willow (*S. babylonica*) aptly called the Ram's Horn Willow, which needs regular pruning to keep it small and shapely. I can't think of a better use for the prunings than to make willow soup!

Bobby Diehl is a member of both INPAWS and the Southern Indiana Daffodil, Hosta, Daylily and Iris Society.

Willow branch by Jan Glimn-Lacy

STOPPING (or at Least Slowing) the Abuse of Public Lands

by Ted Harris

Compared with other states, Indiana has a tiny percentage of land that is federally owned. Nevertheless, this acreage is still significant. Federal ownership on the Hoosier National Forest, for example, consists of 196,000 acres, of which only 13,000 acres are fully protected as a designated wilderness.

Indiana's declining native, biological diversity, as in most areas of the country, is partly due to habitat fragmentation and land abuse by resource extraction industries. This column discusses two examples of taxpayer-subsidized land abuse and what you can do to help.

1 Cattle Grazing on Public Lands.

Despite the fact that only a few percent of our beef cattle are raised on national lands, there are tens of millions of acres of Bureau of Land Management lands and U.S. Forest Service lands that are open to below-cost grazing by the cattle industry. Anyone who has seen the way cattle can degrade an Indiana woodlot can probably also imagine what they have done to our public "rangelands" during the past century and a half. In addition, cattle ranching is a principal reason for rainforest clearing in the tropics.

What you can do:

a) Ask your representative and senators to put an end to "welfare ranching" by raising the lease rates for cattle grazing on public lands to the average for private land leases

and also to begin phasing out public lands grazing altogether.

b) Consider giving up eating beef. (The commercial fishing industry is just as destructive; but that's another story.)

2 Commercial Logging on the National Forests.

Although we have only one national forest in Indiana, the U.S. Forest Service, an agency of the Department of Agriculture, controls 155 national forests with a total of 191 million acres. The national forests have always existed to serve multiple purposes; but since the Second World War, commercial timber cutting has predominated. The United States government and its taxpayers lose millions of dollars each year because this timber is sold below cost. These forests have been crisscrossed with 400,000 miles of logging roads and have been left with ugly, eroding clearcuts in many areas. Only 4% of our timber products come from the national forests; yet the road building and timber sales still continue (sometimes hiding behind justifications regarding "forest health" or "habitat enhancement"). The U.S. Forest Service is slowly being reformed under its current chief, Michael Dombeck; but political pressures, especially from western states congressmen, combined with the fact that the agency's budget is tied to income from these sales, makes changing the system difficult.

What you can do:

a) Ask your representative to co-sponsor H.R. 2789, The National Forest Protection and Restoration Act, which would end commercial logging on the national forests and would re-direct federal subsidies to worker retraining and forest restoration.

b) Consider ways to reduce your own use of wood.

Here's how to reach your congressmen:

Write to your representative at the House of Representatives, Washington, D.C. 20515 and to Senators at the United States Senate, Washington, D.C. 20510. Or, phone the congressional switchboard at (202) 224-3121 and ask for the person. You'll be able to leave your message with an aide.

Ted Harris is chairman of the Conservation Committee.



M U L T I F L O R A E

Holliday Park Update: Good News!

Four years ago, Indy Parks coordinated its first exotic species control day to help address the obvious decline of native plant communities in Indianapolis. Mature bush honeysuckle in Holliday Park (*Lonicera maackii*, *tatarica*, and *x bella*) had infiltrated the forest understory, severely reducing the numbers of native shrubs, seedling trees and herbaceous cover. Volunteer land stewards from INPAWS, CILTI, Sierra Club, TNC, Master Gardeners, and Friends of Holliday Park are just some of the groups that joined in to combat the problem. All of the hard work of the volunteers has not been in vain. The mature honeysuckle has been removed from all of the target areas, and follow-up control this fall will nearly eliminate the re-sprouts that had escaped the last four years of maintenance.

Park visitors have commented about the rapid return of native flora after the mature honeysuckle were removed. The oldest honeysuckle found was twenty seven years old.

Oak seedlings are now a welcome sight in the understory, where in some areas, there was a suppression of young replacement trees due to the invasion. Other invasive exotic plants targeted for continued control are: Wintercreeper (*Euonymus fortunei*), Myrtle/Periwinkle (*Vinca minor*), Stink Tree (*Ailanthus altissima*), European High Bush Cranberry (*Viburnum opulus*), Common Buckthorn (*Rhamnus cathartica*), Black Jetbead (*Rhodotypos scandens*), and Japanese Honeysuckle (*Lonicera japonica*). It appears that Garlic Mustard (*Alliaria petiolata*) is now declining in the high-quality areas of the Holliday woods due to volunteer efforts the last two seasons.

For information on how you can help, please call Holliday Park at (317) 327-7180.

Pictures of the control days at Holliday Park are available via e-mail attachment. Send requests to dmiller@indygov.org.

Don Miller

The Woodland Committee of Historic Hoosier Hills has reprinted

**Charles Deam's
Trees of Indiana and
Shrubs of Indiana.**

The cost is \$16 per book plus \$3 shipping. They are planning to reprint Deam's *Grasses of Indiana* and *Ferns and Mosses of Indiana* for the first time as one book. If you are interested in adding one of these great resources to your library, contact:

**Historic Hoosier Hills
Woodland Committee
P O Box 407
Versailles IN 47042**

Phone (812) 689-6456
Ext 204

Please Don't Mash the Caterpillars!

Have you captured any caterpillars lately? My grandchildren told me how much fun it could be and they were right! I captured one fat fellow that was lunching in the dill patch and put it in a jar. In less than 48 hours, the black and yellow, wildly striped caterpillar magically became transformed into a lime-green chrysalis. It resembled a tiny dragon with a double row of golden spots marching down its back and two golden "eyes."

After about eight days, the chrysalis began changing from lime green to a very dark color and I knew it "was time." Soon I saw what looked like a large black wasp in the bottom of the jar and thought, "Oh no, that wasp will get after my butterfly" and then suddenly realized that the wasp WAS the butterfly—a beautiful Eastern Black Swallowtail. I put a stick into the jar and the new butterfly promptly

climbed up and out. It clung to the stick, opening and closing its tiny, damp, wrinkled wings which got bigger and drier as fluid was pumped into them. It finally flew off, but I saw it flit past later as I sat on the patio—pretty neat. Try capturing a caterpillar. It is really fun to watch these miracles!

Carolyn Harstad



4-H Report

Sophia and Dan Anderson would like to report that, at the Marion County Fair, there were six wildflower exhibits, two from each year level. Jeff Jones, of the Marion County Extension Office, surveyed 4-H programs throughout the state, and learned that Owen, Lake, Knox and Martin Counties, in addition to Marion, had Wildflower entrants. There were 34 counties with "Weeds" projects. C'mon, INPAWS members, help get the wildflower project started in your county. All the materials are prepared—all you need to do is to talk with your local 4-H coordinator at the extension office and show him or her a copy of our manual. If you would like one, please call Sophia Anderson at 317-849-3105 or e-mail Dan Anderson at danand@netdirect.net.

Wild Ones,

a non-profit organization dedicated to natural landscaping and related education, is hosting its annual meeting and seed exchange on

Thursday, November 19, 1998 at 7 PM in Carol Stream, Illinois.

Here's your chance to buy or trade seeds for wildflowers, native Illinois forbs and grasses (lots of hard-to-find species!), annuals, herbs, other perennials and some trees and shrubs. You'll see photos of members' gardens and find out how Wild Ones can help you grow wildflowers, design a natural landscape or even start your own prairie. There is no admission fee.

For more information or directions call (630) 415-IDIG.

INDY Parks Events

Holliday Park is sponsoring three field trips to Jasper-Pulaski Nature Preserve to see the gathering of the migrating sandhill cranes. Tours will leave from the park at 11 AM on October 30th, November 5th and November 7th.

The fee of \$50 includes transportation, lunch, snacks and guides.

Want to learn more about nature photography? Ron Everhart, naturalist and photographer, will present a seminar on his photographic work in the national parks at the Holliday Park Visitor Center on September 26th, from 1–5 PM. The fee is \$50.

Also in Holliday Park, a free visit to the arboretum will be offered on October 17th, beginning at 10 AM.

At Eagle Creek Park, our Dr. Becky Dolan will lead a wildflower hike on September 12th, from 9 AM until noon. She'll focus on composites, which constitute one of the more challenging plant families.

Two weeks later, husband Dr. Tom Dolan will lead a search for, and study of mushrooms and other fungi. Time will also be 9 AM to noon.

Registration fee for each hike is \$10.00.

Dan Anderson



NATURE WALKS AT BUTLER UNIVERSITY

Dr. Rebecca Dolan, Director of the Friesner Herbarium at Butler University, will be leading tours on the Butler campus on the following Tuesdays at noon:

October 13

topic to be announced

November 10

topic to be announced

December 8

topic to be announced

Meet behind Gallahue Hall near the greenhouse. Tours will last about 40 minutes. There is no charge and all are welcome.

If you would like to receive a monthly reminder of the walk, or wish to be dropped from the reminder list, please call Dr. Dolan at 317-940-9413, or email rdolan@butler.edu.

Speakers Bureau

Many thanks to Bob and Lou Rice and Ron and Carolyn Voegelé for opening their prairie sites to visitors this past month.

If you would like to participate in the speakers bureau please call

Colletta Kosiba 317-852-5973

<http://www.inpaws.org>

Visit our website for news and information about INPAWS and native plant issues, as well as links to a wealth of like-minded organizations.

We would like to update our site with **your** news, information, comments, ideas, opinions, suggestions. In short, anything of interest to all concerned with preserving native plants and their habitats.

Please email Anne Wilson • wilson@hsonline.net.

Free for the Observing

by Dan Anderson

Carolyn Harstad, our new editor, asked me to continue writing a column for *INPAWS News*. I confess I've just about run out of ideas for edibles articles, but I couldn't think of a catchy name, so I guess I'll just stick with "Free for the . . ."

Sophia and I went to England for two weeks in June, and after a miserable three-day delay before getting there, thanks to a missed plane connection, we had an enjoyable trip. The tour was history- and building-oriented, but I managed to find a number of wild flowers, including two varieties of orchid.

Hilary Cox and John Pankhurst had commented several times on the beautiful gardens in England, but until seeing lovingly cared-for gardens around even the smallest homes, I was somewhat skeptical. There seem to be more varieties of garden plants available there than here, and I am firmly convinced that the absence of hot weather and torrential rains, followed by baking heat, is favorable to the cultivation of plants.

England and Ireland, like us, have their invasive plants. The roadsides in southern and central Ireland are bordered for miles by Fuschia bushes, with their showy purple and red blossoms. Buddleia (Butterfly Bush) seems to have gone wild in Bristol and other areas, with plants hanging out of bridge abutments and growing out of walls. On one of our walks in York, Sophia encountered some stinging nettles, and suffered considerable discomfort. A local druggist suggested we find some dock, and rub the sting with the leaves. I found a plant resem-

bling our Curly Dock, and Sophia tried it out. Much to our relief, it worked!

We had wanted to see Kew Gardens, but our missed plane deprived us of the London sightseeing. We did, however, get to see the Royal Gardens in Edinburgh, which was perhaps the highlight of our trip. They had thousands of specimens from all over the world, most-



ly outside but many in a connected series of 6 - 8 greenhouses. Their Garden Shop boasted a bewildering variety of flowers, especially varieties of primrose and bellflower which I have never seen here.

Back home in Indiana this seems to be a good year for Joe-Pye Weed (*Eupatorium* sp.) as I have found more young plants coming up than I've ever seen before. Several of our

Purple Fringeless Orchis (*Habenaria peramoena*) have bloomed beautifully, but my transplantation efforts were only partially successful. (We have some popping up in an area we keep cut, and I've been trying to move them to an area nearer the lake so they can get plenty of water). The deer munched several before I got a fence around them, and the Owen County floods washed out several more. Another area which we used to cut seems to be attractive to Christmas and Sensitive ferns, so I've been trimming around them and letting them gradually take over. Any surplus will go to INPAWS plant sales and two corners of our yard in Indianapolis where grass doesn't do very well. Several of the Jerusalem Artichokes (*Helianthus tuberosus*) in a bed next to our house have reached the level of the gutters and haven't formed flower heads yet! Bless 'em, for the tubers of this sunflower are one of the tastiest wild foods around, either raw or cooked. Speaking of wild foods, in July Sophia and I found over seven pounds of fresh oyster mushrooms, some of which were eaten speedily, but most wound up in the freezer for later use.

I hope that all of you have enjoyed your summer, and I look forward to meeting many of you at fall INPAWS activities.

Dan Anderson recently retired as INPAWS newsletter editor (he edited 14 issues—Volume II Number 1 through Volume V number 2) and will continue to contribute his observations to these pages.

Natural Areas Association Conference

October 6-10, 1998, Mackinac Island, Michigan

INPAWS members with the time and available cash might be interested in attending the 25th Annual Conference of the Natural Areas Association. The actual conference will be October 6 to 10, 1998, at the Mission Point Resort on historic and car-free Mackinac Island, Michigan. Pre-conference field trips start October 3 and feature hiking, canoeing, birdwatching, and/or exotic invasives-watching, on the mainlands of Michigan near Mackinack; those staying through October 10 can choose between salmon fishing or a Pow Wow and community feast organized by the N.A.A.'s co-host, the Mackinac Straits Area Native American Community.

Also, October 8 will be devoted to field trips, with 23 different all-day trips going to various natural areas

near the conference site. Two fairly typical field trips will visit *Pine Barrens and Dry Sand Prairie Restoration Projects*, and *Watershed and Wetland Restoration on the Seney Wildlife Refuge*. Another trip will look at *Native American Land Use and Forest Histories at Colonial Point* . . . That trip will examine archaeological, historic, and ethnographic sources, among others, to reveal how native fire-management and agricultural practices determined the species composition of this old-growth forest—red oak stands in some places, beech and maple elsewhere.

Alas, the other three days of the conference will involve sitting down indoors. Speakers will discuss the past, present, and future of natural areas and their role in conservation planning and sustainable develop-

ment. Wolf recovery, managing freshwater ecosystems, collaborative planning methods, and biocontrol of exotics are among the many topics to be presented.

As you would expect, such a wealth of information won't come cheap. One-day registration is \$55; all five days (including Pow Wow) \$200; with discounts available for students. NOTE: this does not include lodging!

For conference registration information, phone (517) 241-2974 or email hermark@state.mi.us. For lodging at the Mission Point Resort, phone (800) 833-7711.

Art Hopkins,
Associate Editor



INDIANA NATIVE PLANT and Wildflower Society

MEMBERSHIP APPLICATION/RENEWAL

Annual dues pertain to the fiscal year January 1 - December 31. Dues paid after September 1 are applied to the following fiscal year.

☐ Student \$10 ☐ Individual \$18 ☐ Family \$25 ☐ Patron \$100 ☐ Sponsor \$250 ☐ Corporate \$500
Supporter (Additional Donation) \$ _____ Total Enclosed \$ _____

NAME _____ TELEPHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTY _____ ☐ NEW ☐ RENEWAL 9/98

How did you hear about INPAWS?

GIFTS DO HELP. INPAWS donors at the *Supporter*, *Patron*, *Sponsor* and *Corporate* levels will receive special recognition. All donations above *Student*, *Individual* and *Family* dues are most appreciated and can aid our mission. Donations are tax-deductible to the extent provided by law.

Please complete this form and mail, along with your check made payable to:

Indiana Native Plant and Wildflower Society, or INPAWS
c/o Michael Stiffler
2606 S 600 W
Morgantown, IN 46160.

I would like information on these committees:

- | | | |
|--|--|--|
| <input type="checkbox"/> Annual Meeting | <input type="checkbox"/> Hospitality | <input type="checkbox"/> Programs/
Field Trips |
| <input type="checkbox"/> Auction | <input type="checkbox"/> Membership | <input type="checkbox"/> Publications |
| <input type="checkbox"/> Conservation | <input type="checkbox"/> Native Plant
Education | <input type="checkbox"/> Publicity |
| <input type="checkbox"/> Demo Gardens | <input type="checkbox"/> Native Plant
Rescue | <input type="checkbox"/> Speakers
Bureau |
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Projects |
| <input type="checkbox"/> Grants & Awards | | <input type="checkbox"/> Volunteers
Coordinator |
| <input type="checkbox"/> Historian | | |
| <input type="checkbox"/> Other | | |

1 9 9 8 I N P A W S E v e n t s

Sunday, October 18

Fall plant Identification hike at Scott Starling Nature Sanctuary at the north end of Eagle Creek reservoir. Learn to identify all of those annoying plants that stick to your socks!

Saturday, November 14

INPAWS Fifth Annual Meeting

DowElanco, Indianapolis
9:00 AM to 5:30 PM

Beautifying Indiana with Native Plants and Wildflowers

Planned workshops will highlight and enrich this theme with the hope of action in a positive direction following the Annual Meeting. (i.e. INPAWS might

provide the expertise and ideas for highway plantings or provide a model planting for roadside rest areas, etc.)

Along the Byways

Highway plantings and beautification, Dr. Breunig

More than Springtime

How to get people interested in wildflowers/natives

A Plant in the Wrong Place

The problem with invasive exotics, Bill McKnight

Restoring the Limberlost

How to re-establish plant communities

Wild Seeds-Cleaning, Saving, Growing

Genome, seed sources, seed gathering, cleaning, saving, and propagating, Dan Zay

All of the Woodies

Native trees, shrubs and vines, Linda Akin, Hayes Arboretum

Tentative Schedule

9:00 to 10:00 AM

Registration, refreshments, exhibits

10:00 AM *Introductions*

10:15 to 11:00 AM

First Workshops

11:05 to 11:50 AM

Annual Meeting

12:00 to 1:00 Luncheon

1:15 PM **Dr. Robert Bruenig,**

Executive Director, National

Wildflower Research Center,

Lady Bird Johnson Wildflower

Center, Austin, Texas.

2:15 to 3:00 PM

Second Workshop

3:15 to 3:45 PM

Third Workshop

3:50 to 4:25 PM *Wrap-up Session*

4:30 to 5:30 PM *Reception with entertainment and refreshments*

Details and registration information to follow.

Kevin Tungevick • 765-354-2775



INDIANA NATIVE PLANT
and Wildflower Society

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INDIANA

Native Plant and Wildflower Society

NEWS

Volume V Number 4

Winter 1998

Ferns as Garden Plants

by Dan Anderson

Almost every yard has a corner where grass seems reluctant to grow, due to shade from nearby trees and bushes. Ground covers, such as ivies, Ajuga and Myrtle are often recommended, as are many hostas, to cover the more-or-less bare areas with a pleasing green carpet. Unfortunately, these are not native plants, but there is a group of natives which may serve equally well—the ferns.

I have led groups into many woods on field trips and visited others with INPAWS.

Some seem to be almost devoid of ferns, while others, such as our Owen County hideaway, can boast of ten or more species of ferns and fern allies, some growing in large patches. My experience has been mainly with the species I find in our woods, and I am sure there will be others which will perform as well.

The northwest corner of our yard was a problem spot—the grass

refused to grow, and was replaced by clumps of violets. I have nothing against violets (they're edible) but I didn't want them taking over the yard. My first attempt at revegetation was with Ground Cedar (*Lycopodium flabelliforme*).

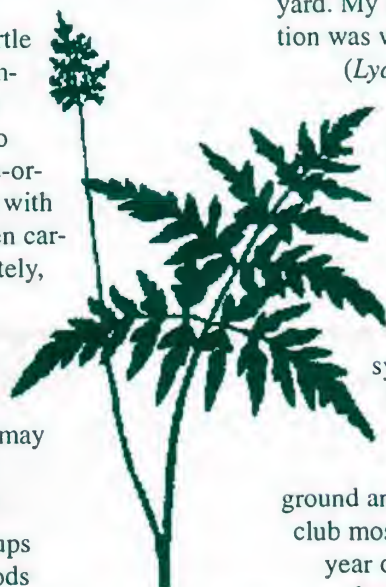
This interesting club moss covers the sides of several hills on our property, and looked like a good candidate. I carefully dug up about 10-15 feet of the runners, noting that the root system (if it can be called that) consisted of one thread-like rootlet every foot or so. I dug up the ground and carefully planted the club moss. It lingered for about a year or so, then died off. A similar experiment the next year was unsuccessful. Possibly the inadequacy of the root system is a problem—I would appreciate comments on that.

Then I turned to ferns. One of our favorites is Christmas Fern (*Polystichum acrostichoides*). It may be the commonest fern in our woods, growing in conditions from half-day sun to mostly shade. About 25 years ago we transplanted several clumps to a shady area in front of our house, along with English Ivy

ground cover. After all that time, the ferns still force their way through the ground cover every spring. We've never lost one, so I used Christmas Fern for the bulk of the planting in our shady spot. The plants form symmetrical clumps of many fronds, and stay green until late in the winter.

We're not fans of large masses of the same kind of plant, so I added other ferns to the area. One, Ebony Spleenwort (*Asplenium platyneuron*) resembles a miniature Christmas fern, but with 1 to 3 fronds compared to the 5 to 15 of the latter. It, too, has long-lasting foliage, and can tolerate considerable sun. Its size (about 6-10 inch-

Ferns as . . . continued on page 2



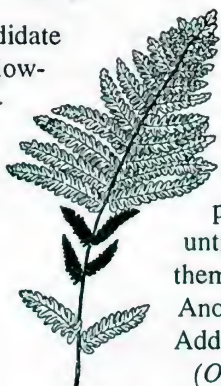
Cut-leaved Grape Fern
Botrychium dissectum

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Save the Charismatic	11

es) makes it a good candidate for planting along with low-growing flowers, to provide contrast in beds receiving less than full sunlight. It could make an attractive border plant as well.

Another fern in the same size range, but lacier, is Fragile Fern (*Cystopteris fragilis*). This seems to tolerate



Interrupted Fern
(*Osmunda claytoniana*)

transplanting well and contrasts with the plainer ferns above. It must be handled carefully because the stem breaks easily (hence the name).

Sensitive Fern (*Onoclea sensibilis*) and New York Fern (*Thelypteris noveboracensis*) are two medium-sized ferns which we have transplanted successfully. The former is rather straggly and is not attractive as an individual plant—it looks better in a bed. Both ferns have the disad-

vantage of being susceptible to cold weather and become dormant early in fall.

The grape ferns, *Botrychium* spp. make interesting specimen plants, but often don't appear until late in the summer, ruling them out for some applications. Another interesting fern is the Adder's-Tongue Fern

(*Ophioglossum engelmanni*). This un-fernlike plant, with a single ovate leaf, is often overlooked among the maze of other leaves on the woods floor. It's easy to dig, but seems to last only a year or two after transplanting.

Maidenhair (*Adiantum pedatum*) and Ostrich (*Matteucia struthiopteris*) Ferns, particularly the latter, are often used in garden plantings. The 3-4-foot fronds of the latter are an attractive complement to taller flowers and foundation plantings.

Fern clumps can be dug up and divided when they become large.

Reproduction from spores can be tedious: a fellow Optimist friend collected spores late this summer and has germinated a large number of pinhead-sized prothallia (the intermediate stage of development). He bought a number of plastic salad containers like those used by fast-food restaurants and is using them as miniature greenhouses. According to him, the prothallia have to be kept moist for six months before the final fern plants will develop!

Consider using ferns more in your garden! They can be obtained from nurseries, INPAWS plant sales, plant rescues, or from a friend who is lucky enough to have some in her or his woods. They may not be wildflowers, but they certainly qualify as native plants!

Dan Anderson is a former editor of INPAWS News and sends us his observations from Marion and Owen Counties.

Indiana Native Plant and Wildflower Society Newsletter
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Published quarterly by the Indiana Native Plant and Wildflower Society for members.

The Mission of the Indiana Native Plant and Wildflower Society is to promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the values, beauty, diversity and environmental importance of indigenous vegetation.

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President's Message

by Ruth Ann Ingraham

Who among you reading this newsletter hasn't mused about our Midwestern climate this fall as we experience one record-breaking warm day, one record-breaking warm week after another.

Beneath my beech trees small, bright-green carpets of waterleaf have emerged.

Leaf buds on the red chokeberry shrubs in my front garden are swelling and ready to unfurl. Sightings of forsythia in full bloom have been reported.

The sap is rising.

So what about sap. For a moment forget about the unseasonable rising of such. My dictionary tells me that it is characteristic of a healthy, fresh or vigorous condition. The essential element.

I conclude that INPAWS has an abundance of that sap.

If you attended our Fifth Annual Meeting, you know we have sap.

If you were there and heard twenty Board members relate what they've been doing, with the help of dozens of others, for our organization and the plant world during the past year, you know we have sap.

And if you heard some of the goals for the coming year and years expressed, you hope we have sap.

And therein lies the challenge—to metaphorically keep the sap flowing upward, defying gravity, and thus transforming dormant brown branches into abundant, showy clusters of leafy, flowery growth.

May you all have a sappy year—Indiana's native sugar maple kind of sap, of course.



Wild Garden is the first national gardening magazine to demystify the process of using native plants to create beautiful landscapes that provide bird and wildlife habitat and support the ecosystem. *Wild Garden* is about feeding the soul while giving something back to the earth!

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Wild
GARDEN

Beautifying Indiana with Native Plants and Wildflowers

Report of Fifth Annual Meeting

by Margo Jaqua, Chairman, Annual Meeting Committee

"Beautifying Indiana with Native Plants and Wildflowers" was the chosen theme for our Fifth Annual Meeting—a theme that we hope will lead to action. Our desire is that INPAWS will take ownership and provide ideas and expertise for native plantings along our Indiana highways.

We met on a sunny day on Saturday, November 14, 1998, at Dow AgroSciences' wonderful facility on the northwest side of Indianapolis.

Everyone was extremely pleased to welcome Dr. Robert Glass Breunig, whose timely topic "Knowing Your Home Place" served as a perfect keynote address. Imagine our delight when we discovered that Dr. Breunig, Director of the Lady Bird Johnson Wildflower Center in Austin, Texas, was a Hoosier and had grown up right here in Indianapolis.

Dr. Breunig told us that early in his career Hopi and Navajo Indian people helped to change some of his Midwestern perceptions. As he worked on developing an exhibit about the Indians of the Southwest and their environment around Phoenix, he asked a Native American, "How do your people survive in the desert?" The Native American answered, "We don't survive. We live here." This simple

interchange demonstrated the necessity for native plant appreciation. Dr. Breunig told us that because of the strong influence of these Native Americans, he began to realize that he needed to work to "connect our population to its natural heritage and to develop throughout the land a sense of ecological citizenship—a sense that every place has its own inherent beauty and merits preservation."

The topics of our six workshops were chosen to strengthen our mission. *Along the Byways* led by Dr. Breunig pointed out both problems and possibilities of using native plants along our roads and highways; *All of the Woodies* was designed to acquaint us with native trees, shrubs and vines; *More than Springtime* demonstrated the use of native plants in all seasons of the year; *Restoring the Limberlost* instructed in methods of restoring plant communities and habitats; *A Plant in the Wrong Place* addressed the problems exotics can cause; *Wild Seeds—Cleaning, Saving, Growing* was included to teach us how to clean, save and grow seeds.

A delightful lunchtime performance by *The Weeds* further educated or reinforced knowledge of problem plants and the interdependence of plants and insects.

INPAWS President Ruth Ann Ingraham conducted an informative annual meeting. She introduced the board members who reported on the respective committees.

Following the day's activities, we all enjoyed the closing social as we browsed the many nature displays, the artwork and the books, and listened to the entertaining music of *Blackberry Jam*.

I thank all who participated in and/or helped with the Fifth Annual Meeting.



CONSERVATION COMMITTEE REPORT FOR 1998

by Ted Harris, Chairman

INPAWS' Conservation Committee was formed in 1996 for the purpose of helping to protect Indiana's remaining unprotected natural areas. In addition the committee becomes involved with issues outside Indiana when the affected areas are of great size or when Indiana's elected representatives have a vote.

The Conservation Committee operates in two ways. The first way is to encourage direct protection by working with land owners, land trusts and governmental agencies. During the past year we:

- helped the Central Indiana Land Trust to acquire Burnett Woods;
- made INPAWS a member of the federal Native Plant Conservation Initiative;
- supplied input for the Forest Service's new strategic plan;
- supported the Grand Kankakee Marsh National Wildlife Refuge, as well as wilderness proposals in several areas of the country.

At the same time we have opposed road building in natural areas, commercial timber cutting on the national forests, public lands cattle grazing, and the numerous anti-environmental riders that were attached to the federal appropriation bills.

The Conservation Committee's other way of operating is to raise awareness, through newsletter articles, of things INPAWS members can do to improve the long-term survival of Indiana's native flora

and fauna. In the Summer 1998 issue of *INPAWS News* we suggested these eight things:

- acquiring an environmental license plate;
- joining The Nature Conservancy;
- joining one or more of Indiana's regional land trusts;
- voting for politicians who support conservation;
- helping to control invasive exotics;
- writing letters opposing destruction of natural areas;
- staying informed about conservation issues; and last but not least,
- personally helping with restoration, for instance by volunteering at The Nature Conservancy's Kankakee Sands project.

The native plant communities we value have been under intense, human-caused pressure for two hundred years.

Protecting what we have left requires more than sympathetic thoughts. It needs your commitment and action in tangible ways. Thank you.

Ted would welcome hearing from INPAWS members who have concerns relating to conservation issues or suggestions for topics we should address.

*Write to him at
1120 Ridgeway Drive
Crawfordsville, IN 47933-1063
or call him at 765-362-1509.*



INPAWS field trip to the Indiana Dunes

M U L T I F L O R A E

INPAWS Alien Invasive Plants Committee Has First Meeting

A group of INPAWS members interested in the problem of alien invasive plants in Indiana met on October 18 at Carolyn Bryson's home. In addition to Carolyn, attending were Ellen Jacquart, Jim and Chris Brewster, Jean Vietor, Marilyn and Charles Spurgeon, Bill Brink, Kevin Tunesvick, and Tina Meeks.

The committee had a good discussion of the serious alien invasive problems around the state, and talked about what might be done to bring attention to this issue. There was a general agreement that the public is, for the most part, unaware of the problem and what they might be able to do to help. It was decided that the committee's efforts would best be focused on public education.

The committee is now looking for volunteers who would be interested in helping develop the educational materials that would be aimed at different groups (e.g. school children; landscape architects, nurserymen and other professionals; Master Gardener programs). The committee will also work closely with other groups and agencies in the state that are interested in the alien invasive problem. Ellen Jacquart has agreed to chair this committee, and anyone interested in helping should contact her at

ejacquart@aol.com
317-923-7547 (days)
812-876-9645 (evenings).

Wrap-up of the Annual Meeting: *Where We Left Off*

At the November annual meeting, I enjoyed hearing Dr. Breunig's vision for the Lady Bird Johnson Wildflower Center and his ideas for reestablishing native flora at the Center. He challenged us to remember that as Hoosiers we have our own native flora unique to Indiana. A lot of interesting ideas were discussed during the wrap-up session as we explored the best method for getting the word out to our state and local communities. And what is the best way to do that? Is it through our speakers bureau? education through our schools? developing native flora planting standards (what plant when and where)? Should we help with research and development needed to start utilizing Indiana's native flora? Perhaps we need to find a champion—someone whose voice can be heard by many. Or maybe it's time to find a home for INPAWS in order to promote the use of our native plants, just as Dr. Breunig is doing at the Lady Bird Johnson Wildflower Center.

I would like to explore Dr. Breunig's theme *Knowing our Home Place* and his vision of the Lady Bird Center, as we try to identify ways that we, as Hoosiers, can promote and publicize the use of our native plants. If anyone is interested in discussing these questions in a smaller group, please email me at rmrian@iei.net or call me at my office (317) 585-6100 or home (317) 823-4881.

Mike Rian



NATURE WALKS AT BUTLER UNIVERSITY

Join Dr. Rebecca Dolan for nature walks on the second Tuesday of each month at noon:

January 12

Canal critters—Look at plankton from the canal under microscopes

February 9

Identify birds on the Butler Campus

March 9

Check out early spring wildflowers

Meet behind Gallahue Hall on the Butler University campus near the greenhouse. Walks will last about 45 minutes. There is no charge and all are welcome.

If you would like to receive a monthly reminder of the walk, or wish to be dropped from the reminder list, please call Dr. Dolan at 317-940-9413, or email rdolan@butler.edu.

<http://www.inpaws.org>

Visit our website for news and information about INPAWS and native plant issues, as well as links to a wealth of like-minded organizations.

We would like to update our site with **your** news, information, comments, ideas, opinions, suggestions. In short, anything of interest to all concerned with preserving native plants and their habitats.

Please email Anne Wilson • wilson@hsonline.net.

Hepatica Hills

Juanita Graham has asked that the Indiana Native Plant and Wildflower Society let it be known that the land which she has nurtured, and the home where she has lived for over forty years, will be for sale.

Juanita is known by many in INPAWS. A Charter Member, she has donated hundreds of native plants for our sales and auctions, has joined many of our field trips and has attended most of our programs.

She calls her place *Hepatica Hills*. She wishes to sell *Hepatica Hills*, someday, to a buyer who would conserve the land and protect it from exploitation.

Hepatica Hills includes five acres of rich woods (with no grass to mow) and is home to hawks and owls and dozens of species of native plants. A deep ravine bisects the land. Sheets Creek runs through the bottomland. Situated on a bluff to take advantage of the best view is the 1950's contemporary home designed by Edward Pierre for the Grahams. It is a one-story house with two bedrooms and two baths. The location is in northern Marion County, south of Zionsville, with easy access to I-465 and I-65.

If, from this sketchy description, you are interested in exploring further the possibility of someday owning *Hepatica Hills*, write to

Juanita Graham
c/o Ted Harris
1120 Ridgeway Drive
Crawfordsville, IN 47933.

You may call Ted at
765-362-1509
for more details.



Three National Native Plant Magazines

A condensed version of Don Miller's recent INPAWS News article, *Going Native on the Monon*, has been selected to appear in the premiere issue of the new magazine, *Native Plants*, to be published by the **Lady Bird Johnson Wildflower Center** in Austin, Texas. Managing Editor Karen Bassett explains, "The publication is an expansion of our national newsletter, and our first step toward a magazine. It would be great to include the Monon story in our inaugural issue in the native plant society news column. May we?" Of course! What an honor. Watch for it!

Joanne Wolfe, editor of *Wild Gardens*, has generously offered INPAWS members the reduced subscription rate of \$12.50 per year (see their ad on page 3). This offer is valid for new or renewal orders. In an upcoming issue, INPAWS will be included in a special section list-

ing native plant societies across the nation. Andy Wasowski, featured speaker at our 1997 Annual Meeting, is a frequent contributor to this beautiful new magazine.

Wildflower, North America's Magazine of Wild Flora, published in Canada, is another excellent publication. Editor Jim Hodgins writes, "Our mandate is the study, conservation, restoration and cultivation of our North American native flora. Please join us."

Each of these full color magazines is published quarterly and is packed with excellent articles and handsome illustrations.



THE 1999 JOINT FIELD MEETING OF THE NORTHEASTERN SECTION OF THE BOTANICAL SOCIETY OF AMERICA AND THE TORREY BOTANICAL SOCIETY

will be held in northern Indiana from June 20th to 24th. This area has an interesting mix of vegetation and flora, combining species typical of the prairie border and boreal regions with the deciduous forests of the Midwest.

The meeting will include three days of field trips to savannah and prairie sites in northwestern Indiana, and to fens and mature forests in the northeastern part of the state. Sites to be visited will include the Jasper-Pulaski and Pigeon River areas, and the field trip leaders will include some well-known Indiana botanists. Evening programs will introduce

regional plant ecology and floristics. The estimated meeting price of \$225 will include air-conditioned housing (Sunday through Wednesday nights) and meals (Sunday evening through Thursday breakfast) on the campus of Manchester College, and transportation to field sites.

For more information contact:

Dr. David J. Hicks
Biology Department
Manchester College
604 College Avenue
North Manchester, IN 46962
(219) 982-5309
djhicks@manchester.edu

A Low-Tech Method of Starting Wildflower Seeds

by Betsy Wilson

I dreamed of a natural landscape in my back yard as I purchased a large selection of seeds at INPAWS meetings. But how would I get these seeds

to germinate? I

had been advised to plant them as soon

as I brought them home, but I wondered—how would I recognize the newly sprouted seedlings? And how would I keep our resident sparrow population from eating the seeds I planted?

I decided to try a variation on the method I use to start my vegetable seeds. I filled old, but clean, four or six-pack plastic flowerpots (that annuals come in) with a soilless potting medium. My homemade variety consists of one-third peat moss, one-third vermiculite, and one-third composted manure. I put the seeds on top of the medium and covered all but the Cardinal Flower seeds with a very thin layer of this mix. The Cardinal flower seeds were left uncovered.

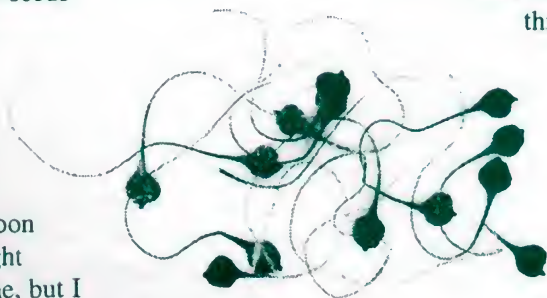
I put the pots on shallow-rimmed trays. These collect rainwater which wicks up into the pots, keeping the seeds moist between showers. I put the trays on our deck in the late fall or early winter, covering them with a row cover, available at garden centers or from seed catalogs, called Reemay. This covering, anchored on all sides by boards so it would

not blow off, kept the seeds from blowing away, being washed out of the pots, or being eaten by local birds and animals. It allowed

water and light to pass through it, kept

weed seeds from blowing into the pots, and protected the young seedlings as they emerged in the spring.

I moved the pots, still on their trays, into the sun as the weather warmed up.



Leather Flower seeds
Clematis viorna

My seeded trays included:

- Big Bluestem (*Andropogon gerardii*)
- Little Bluestem (*Andropogon scoparius*)
- Dense Blazing Star (*Liatris spicata*)
- Compass Plant (*Silphium laciniatum*)
- Cup Plant (*Silphium perfoliatum*)
- White Snakeroot (*Eupatorium rugosum*)
- Shooting Star (*Dodecatheon meadia*)
- Cardinal Flower (*Lobelia cardinalis*)
- White Wild Indigo (*Baptisia leucantha*)
- Swamp Milkweed (*Asclepias incarnata*).

Some varieties of seeds were slow to germinate in the spring but eventually emerged. I thinned the seedlings to one per pot after their true leaves appeared. Once the seedlings were up and the weather was warm, I removed the row cover. When the tiny seedlings were about two inches high, I transplanted them to their permanent homes in the garden. The Shooting Star seedlings need to be left in pots until fall because they form a rosette and then become dormant, so I placed these in the garden when we left for vacation and I hope they will emerge in the spring.



Green Dragon seeds
Arisaema dracontium

This fall I have planted Gentian, Jacob's Ladder, trilliums, Solomon's Seal, Green Dragon, and Jack-in-the-Pulpit and once again native plant seeds wait for spring in their pots on my deck. And perhaps in a few years some of these tiny seedlings will be large enough to take to the annual INPAWS spring plant auction!

Betsy Wilson is a charter member of INPAWS and enjoys gardening at her home on the northeast side of Indianapolis.

Funds Available Through INPAWS Small Grants Program

INPAWS is initiating a small grants program to support projects that are in line with the mission of the society. Toward that end, the Board voted last year to allocate \$10,000 from the general fund to an endowment account. Interest from this account will be available for grants. The Awards Committee anticipates funding two grants of up to \$500 each during 1999.

We hope that these small grants will be used in conjunction with other sources of funding for project enhancement such as signage and brochures, special plantings or purchase of native seed stock.

The mission of INPAWS is to promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to

Indiana and to educate the public about the values, beauty, diversity and environmental importance of indigenous vegetation.

Applications are requested from groups or individuals and must be post-marked by March 1, 1999. They will be reviewed by the committee.

Application Procedures for the INPAWS Small Grants Program:

1. Cover sheet including

- Name of project
- Amount requested
- Location
- Applicant/contact person name, address, telephone
- New or existing project
- Category that best describes the project: research, training, education, conservation and habitat, demonstration garden, etc.

2. Text of proposal (not to exceed 2 pages)

- a) A summary of the project, not to exceed fifty words
- b) A clear, concise description of the project which includes the following:
 - How does the project further the INPAWS mission?
 - Why is the project needed?
 - Specific objectives to be achieved
 - Specific information on how INPAWS grant funds would be used

- Who benefits from the project? How many? How do they benefit?
- Names of organizations involved, if any, with a brief description of each, including number of members
- Financial resources committed to the project from other sources, if any
- Anticipated starting and completion date of the project

3. Budget sheet showing:

- a) Labor, material and program costs
- b) Sources and amounts of funds already raised, if any
- c) Total cost of project

Fifty percent of funds awarded will be available at the start of the project, 50% upon receipt of a final report by the Awards Committee. In addition, successful awardees must prepare a poster or other presentation to share with the membership at the Annual Meeting subsequent to completion of the project.

Mail four copies of the grant proposal, post-marked by **March 1, 1999**, to Dr. Rebecca Dolan.

Larger Grant Awards

At the discretion of the Board and membership, larger awards may be made from time to time from the assets of the operating budget. Requests for funds for special projects may be made at any time to the Executive Committee. All requests must be made in writing with a clear statement of how the award would further the mission of INPAWS and benefit our membership.

Dr. Rebecca Dolan
Friesner Herbarium
Butler University
4600 Sunset Avenue
Indianapolis, IN 46208

317-940-9413
317-940-9519 FAX
rdolan@butler.edu



Book Review

by Mike Homoya

The Ferns and Allied Plants of New England

by Alice F. Tryon and Robbin C. Moran. 1997.

Massachusetts Audubon Society.
325 pp. B. & W. photos by Robert Coffin. \$49.95.
ISBN 0-932691-23-4.



The Ferns and Allied Plants of New England is a delightful guide with text by two of the top peridologists in the field, Alice Tryon and Robbin Moran, along with black-and-white photographs taken over fifty years ago by the late naturalist and photographer Robbin Coffin. This combination of authors and photographer has produced a work with up-to-date taxonomic treatments and nomenclature that should help the fern enthusiast accurately identify the fern at hand. Even though it is about New England ferns, almost all of Indiana's species are covered as well.

For the most part the photographs are very nice and capture the species growing in habitat. Many are clearly works of art. However,

some of the photographs provide little help in identification. For example, the plate of ostrich fern (*Matteuccia struthiopteris*) depicting newly emerging fronds is of little use for identification to one unfamiliar with the plant. Deficiencies in some of the photographs are overcome with keys that are generously illustrated with line drawings and silhouettes of dried specimens.

Also included in an appendix is a collection of scanning electron micrographs of fern spores. This is a novel inclusion for a book such as this, but it is of practically no value for identification purposes to those of us without a scanning electron microscope! It would perhaps be more useful to have photographs of those spores that can be obtained with equipment more at hand, such as a compound microscope or stereomicroscope. Except for the quillworts, one doesn't need to see spores to identify the vast majority of species. It would be nice to identify quillworts without the need of a SEM.

Range maps are provided for each species within the geographic areas of New England and the world. The global maps are at such a scale that it is sometimes difficult to determine state boundaries. They are particularly helpful though in helping us see the cosmopolitan nature of some species, such as bracken fern (*Pteridium aquilinum*). Our bracken fern occurs on all continents except Antarctica!

There is also a section on ferns for the garden, including instructions for growing ferns from spores. For mature plants, keep in mind that the

cultivation instructions are for New England, which in general is cooler and moister than Indiana, with mostly acidic soils.

As with most books, errors exist. Perhaps most notable is the inversion of Figures 2 and 6 in the key to varieties of *Lycopodium obscurum*. This is an unfortunate mix-up in an already difficult group for the beginner.

(It is interesting to see that these taxa are treated as varieties—Robbin Moran is one of the authors of *Lycopodium hickeyi*, a name given to elevate to species one of the varieties given here).



All in all I like this book. It's informative and fun to read. (Did you know that of all living things the lowly Indian adder's tongue fern holds the record for the highest chromosome number—1,262!) Even with its somewhat high price I would nevertheless recommend this book to anyone interested in ferns.

Mike Homoya is author of *Orchids of Indiana*, published by the Indiana Academy of Science in 1993, and is a botanist with the Indiana Department of Natural Resources.

Save the Charismatic Megaflora

by Art Hopkins

Although INPAWS tends to focus on herbaceous plants, there are of course many woody plants as well that are native and that flower. One of the finest was, or maybe is, the American Chestnut tree, *Castanea dentata*. Before the introduction of the Asian Chestnut blight disease, the American Chestnut comprised as much as 25% of the eastern forest, including Indiana's. Its nuts were considered the finest-flavored of all chestnuts, and were an important cash crop for many. Bear, deer, turkey, squirrel, and passenger pigeons, as well as humans, feasted on its ample, annual bounty.

Its seven-inch-long, creamy flowers whitened the forests in summer, and it was one of our finest timber trees

as well, growing straight and tall. Chestnut wood was straight-grained, lighter than oak and more easily worked, and as rot-resistant as redwood. It was even this country's major source of tannin for tanning leather, according to information from the American Chestnut Foundation. All in all, *Castanea dentata* seems to put the lie to my Cornell professors' caution "there is no perfect tree." Or maybe not, if you count as a flaw that by 1950



this species had almost disappeared along with the passenger pigeon. Across the whole former range of this species, only a few individuals survive with greater or lesser degrees of apparent disease-resistance.

There are, fortunately, grounds for hope. The American Chestnut Foundation was created in 1983 to try to save this plant. The Foundation encourages research in biological control of the blight and is actively breeding trees for disease resistance, starting with

Save the . . . continued on back page



INDIANA NATIVE PLANT and Wildflower Society

MEMBERSHIP APPLICATION/RENEWAL

Annual dues pertain to the fiscal year January 1 - December 31. Dues paid after September 1 are applied to the following fiscal year.

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Please complete this form and mail, along with your check made payable to:

Indiana Native Plant and Wildflower Society, or INPAWS
c/o Katrina Vollmer
3134 North Greenbriar Lane
Nashville, IN 47448.

I would like information on these committees:

- | | | |
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Rescue | <input type="checkbox"/> Speakers
Bureau |
| <input type="checkbox"/> Fund Raising | <input type="checkbox"/> Newsletter | <input type="checkbox"/> Special
Projects |
| <input type="checkbox"/> Grants & Awards | | <input type="checkbox"/> Volunteers
Coordinator |
| <input type="checkbox"/> Historian | | |
| <input type="checkbox"/> Other | | |

crossing the Chinese Chestnut, which is disease-resistant, with surviving American Chestnuts. The Indiana chapter of ACF has about 300 "third backcross trees" in the ground—that is, trees whose ancestry is 15/16 American and 1/16 Chinese Chestnut. Among the ancestors of these trees are some Indiana survivors. It is hoped that, 15 years from now, the Indiana DNR's state nurseries will have disease-resistant, mostly Indiana-native American Chestnut seedlings to sell. Similar



breeding efforts are underway in other states, too, as well as at ACF's national research farm in western Virginia.

Sadly, in this age of orbiting space stations and pork barrel, the foundation receives almost no public funds at all; it relies on private donations. Persons interested in joining or supporting the American



Chestnut Foundation can write to 469 Main St, PO Box 4044, Bennington VT 05201-4044, which is the national office. Or, contact

Bruce Wakeland, chair of the Indiana Chapter of the ACF at 10560 East State Road 8, Culver, Indiana, 46511. (219) 772-6522, between 7 and 9 PM. In particular, if you know of the location of any surviving American Chestnut trees, or if you know any history of the American Chestnut in Indiana—oral history from your relatives, for example—please get in touch with Bruce Wakeland.

Art Hopkins is associate editor of this newsletter, lives in Columbus, and is a landscape architect.

Chestnut illustrations by Jan Glimn Lacy



INDIANA NATIVE PLANT
and Wildflower Society

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